

<XX客户>
XXXXXX检查与评估
(Quarter Rack)

XXXXXXXXXX技术有限公司

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文档控制

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目录

文档控制	2
修改记录	2
分发者	2
审阅记录	2
相关文档	2
目录	3
1. 检查介绍	6
1.1 检查系统	6
1.2 检查规则	6
1.3 检查范围	7
1.4 检查方法	8
2. 检查总结	9
2.1 概要	9
2.2 评价	9
2.3 建议	9
3. Exachk工具说明	10
4. Database Server	11
4.1 版本检查	11
4.2 本地文件系统剩余空间检查	12
4.3 控制器检查	12
4.4 本地硬盘检查	20
4.5 本地硬盘前瞻性错误检查	28
4.6 控制器电池充电状态和温度	28
4.7 验证硬件与Firmware是否匹配	28
4.8 验证网卡网络连接及网络配置信息	29
4.9 验证DB节点与Infiniband交换机连接拓扑图	32
4.10 验证DB节点与Infiniband交换机连接性	33
4.11 NTP检查	34
4.12 CPU和内存资源使用情况	34
4.13 GRID和DB软件补丁检查	35
4.14 DB节点操作系统日志分析	36
4.15 Exachk工具对DB节点健康检查汇总	36
4.16 数据库节点大页的检查	38
4.17 数据库节点系统日志的检查	38
4.18 所有节点（数据库节点和存储节点）时间同步的检查	38
5. Storage Server	40
5.1 版本检查	40
5.2 本地文件系统剩余空间检查	41
5.3 控制器检查	42
5.4 本地硬盘检查	82
5.5 本地硬盘前瞻性错误检查	111
5.6 控制器电池充电状态及温度	112

5.7	验证硬件与Firmware是否匹配	113
5.8	验证软件配置是否一致	113
5.9	检查硬盘和闪存Firmware版本	113
5.10	验证CELL节点与Infiniband交换机连接性	131
5.11	检查第二代PCI桥配置	133
5.12	NTP检查	134
5.13	检查Griddisk状态	134
5.14	检查Griddisk数量是否匹配	136
5.15	检查Celldisk状态	136
5.16	检查Smart Flash Log状态	138
5.17	检查Smart FlashCache状态	138
5.18	cell storage server软件运行日志检查	138
5.19	操作系统日志文件检测	140
5.20	Exachk工具对CELL节点健康检查汇总	141
6.	Infiniband检查	144
6.1	检查HCA端口配置	144
6.2	版本检查	144
6.3	验证软件配置	144
6.4	操作系统日志文件检查	144
6.5	Exachk工具对Infiniband Switch健康检查汇总	145
7.	CRS软件	146
7.1	grid用户Shell Limit检查	146
7.2	Voting Disk配置和状态信息	147
7.3	OCR的配置和状态信息	147
7.4	OCR AUTO备份检查	147
7.5	Grid网络环境配置检查	147
7.6	私网misscount设置检查	148
7.7	CRS后台进程运行状态:	148
7.8	CRS资源运行状态:	148
7.9	CRS告警日志文件检查	149
8.	ASM实例	151
8.1	ASM实例初始化参数检查	151
8.2	ASM磁盘组检查	152
8.3	ASM磁盘组属性检查	152
8.4	ASM磁盘检查	156
8.5	ASM实例告警日志文件检查	159
8.6	Exachk工具对ASM实例健康检查汇总	159
9.	XXXXX数据库	161
9.1	检查是否使用rds协议	161
9.2	初始化参数检查	161
9.3	表空间剩余空间检查	167
9.4	告警日志文件检查	167
9.5	数据库物理备份	167
9.6	Exachk工具对DB实例健康检查汇总	168
9.7	MAA Scorecard	168
10.	硬件相关检查	178

10.1	database server	178
10.1.1	全系统运行情况:	178
10.1.2	组件状态	178
10.1.3	事件 (fault):	180
10.1.4	总结:	180
10.2	Storage cells	181
10.2.1	全系统状态:	181
10.2.2	组件状态	181
10.2.3	事件 (fault):	184
10.2.4	磁盘状态	184
10.2.5	总结:	185
10.3	Oracle Linux操作系统检查	185
10.3.1	LUNAR2DB1	185
10.3.2	LUNAR2DB2	186
10.3.3	LUNARCEL01	187
10.3.4	LUNARCEL02	188
10.3.5	LUNARCEL03	188
10.3.6	总结:	189
10.4	Infiniband 交换机	189
10.4.1	全系统状态	189
10.4.2	系统组件状态	191
10.4.3	系统硬件日志	191
10.4.4	总结:	192
10.5	KVM	192
10.5.1	概述:	192
10.5.2	诊断	192
10.5.3	节点登录:	192
10.5.4	总结:	192
10.6	CISCO	192
10.6.1	状态	192
10.6.2	总结:	193
11.	附录参考	194
	Exadata Firmware and Software版本检查	194

1. 检查介绍

1.1 检查系统

系统主要包括1套Exadata，具体情况如下：

Cluster Name	lunar-cluster
OS Version	Red Hat Enterprise Linux Server release 5.7 (Tikanga) kernel=2.6.18-274.18.1.0.1.el5
CRS Home - Version	/u01/app/11.2.0.3/grid - 11.2.0.3.11
DB Home - Version - Names	/u01/app/oracle/product/11.2.0.3/dbhome_1 - 11.2.0.3.11
Exadata Version	11.2.3.1.1.120607
Number of nodes	5
Database Servers	2 lunardb02 lunardb01
Storage Servers	3 lunarcel03 lunarcel02 lunarcel01

1.2 检查规则

由于一体机内置了许多软件，硬件组合。包括计算节点（Computer Server），存储节点（Storage Server）以及infiniband交换机，CISCO交换机等。任何一个组件都是一个复杂的单元，所以通过单独的检查来确认整体性能存在较大的局限性，因此Oracle根据Exadata的软硬件特点，整理出一套精确的配置要求，以这些配置要求来保证最终Exadata的运行是稳定，高效的。这些规则主要来自于两个方面：

Exadata最佳实践(Best Practices):

整理最佳实践规则的目的是提供一个如何平稳高效的进行Oracle产品安装，优化，升级以及运行的方法。并通过这些方法的传授，使关键客户可以快速的得到Oracle产品在关键行业，关键业务场景下的实施经验，并借此来保证自身所购买的Oracle产品的价值最大化。

这些建议并不是为了替代正式的产品文档，而是对这些文档更有力的补充，理解这些最佳实践规则有时需要更深入的阅读，理解标准文档的相关章节。

最佳实施中的建议是基于大多数关键客户的实施，运行经验，但并不意味着这些建议都是必须实施，或者必定适合所有场景的。

定制和恰当的取舍是需要的，而且在已有产品平台上实施时同样需要经过完整的测试确认，以避免由于业务独特性所带来的风险。

最大可用性架构 (Max Availability Architecture)for Exadata:

MAA(Max Availability Architecture): 现今的系统运维通常都与客户关键的业务相关, 可用性的变化可能直接影响企业的正常运行甚至市场存亡。然而越来越多的系统复杂度在持续提升, IT经理, 架构师和管理员常常发觉很难整理出一套适合所有业务运行的高可用性方案。并且只能将可用性的解决方案交给第三方的咨询公司, 但也许并不能得到一个适合自身业务独特性的可用性方案。

在这个背景下MAA被引入了, Oracle MAA方案的设计目标是让所有Oracle产品的高可用性实施是相对简单的, 摆脱不确定的技术猜测的。 Oracle组建了MAA Team, 并进行了一年的深入工作整理出Oracle产品的高可用性方案, 使Oracle产品的实施能够满足目前最苛刻业务的可用性需求。

本次Exadata健康检查就引用了MAA架构中的多个故障场景的预防策略, 并对照目前的环境配置, 确认是否在不同的故障场景下能够提供最大高可用性支持。这些场景包括:

- A. COMPUTE Server的失败, 如宕机等故障;
- B. Storage Server级的失败, 如宕机, CELL不可用;
- C. 数据库节点失败的支持, 如单节点宕机;
- D. 数据库物理, 逻辑损坏;
- E. 网络及数据中心级的损坏;

本次主要使用了MAA与Exadata有关高可用描述, 如果对其它Oracle产品的高可用性实践感兴趣, 可以访问以下网址:

<http://www.oracle.com/technetwork/database/features/availability/maa-090890.html>

各组件运行日志

除此上面两种配置规则的检查外, 本次检查也涉及了以下组件的运行信息检查:

- A. DBNODE的运行日志;
- B. CELLNODE的运行日志;
- C. GRID/ASM/DB的ALERT日志;

1.3 检查范围

Exadata是基于集软件, 硬件, 交换机等设备为一体的技术架构, 本次检查主要针对其中DBNODE/CELLNODE及相关的数据库软件进行了检查, 详细内容包括:

检查组件列表	检查工具
操作系统内核参数	Exachk RDA
操作系统软件包	Exachk RDA
RAC相关的其它系统配置	Exachk RDA
CRS/Grid Infrastructure	Exachk RDA
RDBMS	Exachk RDA
ASM	Exachk RDA
Database和ASM 初始化参数	Exachk RDA
RAC相关其它重要数据库配置	Exachk RDA

1.4 检查方法

本次数据库性能检查的工具是：

- ORACLE 工具 exachk, sundiag.sh, rda 等工具进行系统信息收集。
- 操作系统工具和命令检查操作系统。
- SQL 命令检查数据库配置，SQL 命令在 ORACLE 工具 SQL*PLUS 中运行。

2. 检查总结

2.1 概要

根据客户服务合同的要求，2015年5月05日开始对XXXX的Exadata实施了健康检查。主要包括Exadata系统方面与数据库相关核心参数设置、数据库配置。根据所收集时间点的相关数据来评估主要的配置情况，提供建议使性能加以优化。

2.2 评价

如果工程师在检查中发现Oracle产品的问题，我们将对检查范围内的情况进行记录，并通知客户改正。对于比较复杂的问题，我们将在报告中指出，并建议客户进一步进行相关的详细检查，或建议客户通过MetaLink将问题提交到Oracle技术支持热线，以便问题得到解决。

2.3 建议

No.	问题描述	类型	建议解决时间
			尽快
			尽快
			用户决定
			用户决定
			尽快
			用户决定
			用户决定

3. Exachk工具说明

以下使用Exachk 2.2.0版本进行Exadata一体机健康检查

4. Database Server

4.1 版本检查

机器型号检查

```
[root@lunardb01 oracle]# dcli -g dbs_group -l root dmidecode -s system-product-name
lunardb01: SUN FIRE X4170 M2 SERVER
lunardb02: SUN FIRE X4170 M2 SERVER
```

检测结果：正常

Image版本检查

```
# imageinfo

Kernel version: 2.6.18-274.18.1.0.1.el5 #1 SMP Thu Feb 9 19:07:16 EST 2012 x86_64
Image version: 11.2.3.1.1.120607
Image activated: 2012-08-11 04:33:12 -0700
Image status: success
System partition on device: /dev/mapper/VGExaDb-LVDbSys1

# imagehistory
Version                               : 11.2.3.1.1.120607
Image activation date                 : 2012-08-11 04:33:12 -0700
Imaging mode                         : fresh
Imaging status                       : success
```

检测结果：正常

操作系统版本检查

```
# uname -a
Linux lunardb01.bmcc.com.cn 2.6.18-274.18.1.0.1.el5 #1 SMP Thu Feb 9 19:07:16 EST
2012 x86_64 x86_64 x86_64 GNU/Linux
# cat /etc/oracle-release
Oracle Linux Server release 5.7
# cat /etc/redhat-release
Red Hat Enterprise Linux Server release 5.7 (Tikanga)
# cat /etc/enterprise-release
Enterprise Linux Enterprise Linux Server release 5.7 (Carthage)
```

检测结果：正常

Ofa程序包版本

```
ofa-2.6.18-274.18.1.0.1.el5-1.5.1-4.0.58
```

检测结果：正常

HCA卡firmware版本

```
Infiniband HCA firmware version
Firmware version: 2.7.8130
```

OFED版本

```
1.5.1
```

4.2 本地文件系统剩余空间检查

```
[root@lunardb01 oracle]# dcli -g dbs_group -l root df -h
lunardb01: Filesystem                Size      Used Avail Use% Mounted on
lunardb01: /dev/mapper/VGExaDb-LVDbSys1
lunardb01: 30G      16G      13G   57% /
lunardb01: /dev/sda1                  502M       36M   441M    8% /boot
lunardb01: /dev/mapper/VGExaDb-LVDbOra1
lunardb01: 99G      35G      59G   38% /u01
lunardb01: tmpfs                      81G         0    81G    0% /dev/shm
lunardb01: dbfs-dbfs_user@:/         158G     111G    48G   71% /dbfsmnt
lunardb02: Filesystem                Size      Used Avail Use% Mounted on
lunardb02: /dev/mapper/VGExaDb-LVDbSys1
lunardb02: 30G      6.3G      22G   23% /
lunardb02: /dev/sda1                  502M       36M   441M    8% /boot
lunardb02: /dev/mapper/VGExaDb-LVDbOra1
lunardb02: 99G      18G      77G   19% /u01
lunardb02: tmpfs                      81G         0    81G    0% /dev/shm
lunardb02: dbfs-dbfs_user@:/         158G     111G    48G   71% /dbfsmnt
```

检测结果：正常

4.3 控制器检查

```
[root@lunardb01 oracle]# dcli -g dbs_group -l root /opt/MegaRAID/MegaCli/MegaCli64
-LdPdInfo -aALL
lunardb01:
lunardb01: Adapter #0
lunardb01:
lunardb01: Number of Virtual Disks: 3
lunardb01: Virtual Drive: 0 (Target Id: 0)
lunardb01: Name                      :DBSYS
lunardb01: RAID Level                      : Primary-1, Secondary-0, RAID Level Qualifier-0
lunardb01: Size                      : 278.464 GB
lunardb01: Mirror Data                  : 278.464 GB
lunardb01: State                      : Optimal
lunardb01: Strip Size                  : 1.0 MB
lunardb01: Number Of Drives           : 2
lunardb01: Span Depth                 : 1
lunardb01: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunardb01: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunardb01: Default Access Policy: Read/Write
lunardb01: Current Access Policy: Read/Write
lunardb01: Disk Cache Policy           : Disabled
lunardb01: Encryption Type            : None
lunardb01: Is VD Cached: No
lunardb01: Number of Spans: 1
lunardb01: Span: 0 - Number of PDs: 2
lunardb01:
lunardb01: PD: 0 Information
lunardb01: Enclosure Device ID: 252
lunardb01: Slot Number: 0
lunardb01: Drive's position: DiskGroup: 0, Span: 0, Arm: 0
lunardb01: Enclosure position: 0
lunardb01: Device Id: 9
lunardb01: WWN: 5000CCA0259BD6E7
lunardb01: Sequence Number: 2
lunardb01: Media Error Count: 0
lunardb01: Other Error Count: 0
lunardb01: Predictive Failure Count: 0
lunardb01: Last Predictive Failure Event Seq Number: 0
```

```

lunardb01: PD Type: SAS
lunardb01: Raw Size: 279.396 GB [0x22ecb25c Sectors]
lunardb01: Non Coerced Size: 278.896 GB [0x22dcb25c Sectors]
lunardb01: Coerced Size: 278.464 GB [0x22cee000 Sectors]
lunardb01: Firmware state: Online, Spun Up
lunardb01: Is Commissioned Spare : NO
lunardb01: Device Firmware Level: A2B0
lunardb01: Shield Counter: 0
lunardb01: Successful diagnostics completion on : N/A
lunardb01: SAS Address(0): 0x5000cca0259bd6e5
lunardb01: SAS Address(1): 0x0
lunardb01: Connected Port Number: 3(path0)
lunardb01: Inquiry Data: HITACHI H106030SDSUN300GA2B01218NSPWNB
lunardb01: FDE Enable: Disable
lunardb01: Secured: Unsecured
lunardb01: Locked: Unlocked
lunardb01: Needs EKM Attention: No
lunardb01: Foreign State: None
lunardb01: Device Speed: 6.0Gb/s
lunardb01: Link Speed: 6.0Gb/s
lunardb01: Media Type: Hard Disk Device
lunardb01: Drive Temperature :24C (75.20 F)
lunardb01: PI Eligibility: No
lunardb01: Drive is formatted for PI information: No
lunardb01: PI: No PI
lunardb01: Drive's write cache : Disabled
lunardb01: Port-0 :
lunardb01: Port status: Active
lunardb01: Port's Linkspeed: 6.0Gb/s
lunardb01: Port-1 :
lunardb01: Port status: Active
lunardb01: Port's Linkspeed: Unknown
lunardb01: Drive has flagged a S.M.A.R.T alert : No
lunardb01:
lunardb01:
lunardb01:
lunardb01:
lunardb01: PD: 1 Information
lunardb01: Enclosure Device ID: 252
lunardb01: Slot Number: 1
lunardb01: Drive's position: DiskGroup: 0, Span: 0, Arm: 1
lunardb01: Enclosure position: 0
lunardb01: Device Id: 8
lunardb01: WWN: 5000CCA025953633
lunardb01: Sequence Number: 2
lunardb01: Media Error Count: 0
lunardb01: Other Error Count: 0
lunardb01: Predictive Failure Count: 0
lunardb01: Last Predictive Failure Event Seq Number: 0
lunardb01: PD Type: SAS
lunardb01: Raw Size: 279.396 GB [0x22ecb25c Sectors]
lunardb01: Non Coerced Size: 278.896 GB [0x22dcb25c Sectors]
lunardb01: Coerced Size: 278.464 GB [0x22cee000 Sectors]
lunardb01: Firmware state: Online, Spun Up
lunardb01: Is Commissioned Spare : NO
lunardb01: Device Firmware Level: A2B0
lunardb01: Shield Counter: 0
lunardb01: Successful diagnostics completion on : N/A
lunardb01: SAS Address(0): 0x5000cca025953631
lunardb01: SAS Address(1): 0x0
lunardb01: Connected Port Number: 2(path0)
lunardb01: Inquiry Data: HITACHI H106030SDSUN300GA2B01218NN1WTB
lunardb01: FDE Enable: Disable

```

```

lunardb01: Secured: Unsecured
lunardb01: Locked: Unlocked
lunardb01: Needs EKM Attention: No
lunardb01: Foreign State: None
lunardb01: Device Speed: 6.0Gb/s
lunardb01: Link Speed: 6.0Gb/s
lunardb01: Media Type: Hard Disk Device
lunardb01: Drive Temperature :24C (75.20 F)
lunardb01: PI Eligibility: No
lunardb01: Drive is formatted for PI information: No
lunardb01: PI: No PI
lunardb01: Drive's write cache : Disabled
lunardb01: Port-0 :
lunardb01: Port status: Active
lunardb01: Port's Linkspeed: 6.0Gb/s
lunardb01: Port-1 :
lunardb01: Port status: Active
lunardb01: Port's Linkspeed: Unknown
lunardb01: Drive has flagged a S.M.A.R.T alert : No
lunardb01:
lunardb01:
lunardb01:
lunardb01: Virtual Drive: 1 (Target Id: 1)
lunardb01: Name :
lunardb01: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunardb01: Size : 278.464 GB
lunardb01: Parity Size : 0
lunardb01: State : Optimal
lunardb01: Strip Size : 1.0 MB
lunardb01: Number Of Drives : 1
lunardb01: Span Depth : 1
lunardb01: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunardb01: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunardb01: Default Access Policy: Read/Write
lunardb01: Current Access Policy: Read/Write
lunardb01: Disk Cache Policy : Disabled
lunardb01: Encryption Type : None
lunardb01: Is VD Cached: No
lunardb01: Number of Spans: 1
lunardb01: Span: 0 - Number of PDs: 1
lunardb01:
lunardb01: PD: 0 Information
lunardb01: Enclosure Device ID: 252
lunardb01: Slot Number: 2
lunardb01: Drive's position: DiskGroup: 1, Span: 0, Arm: 0
lunardb01: Enclosure position: 0
lunardb01: Device Id: 10
lunardb01: WWN: 5000CCA0259DD9F3
lunardb01: Sequence Number: 2
lunardb01: Media Error Count: 0
lunardb01: Other Error Count: 0
lunardb01: Predictive Failure Count: 0
lunardb01: Last Predictive Failure Event Seq Number: 0
lunardb01: PD Type: SAS
lunardb01: Raw Size: 279.396 GB [0x22ecb25c Sectors]
lunardb01: Non Coerced Size: 278.896 GB [0x22dcb25c Sectors]
lunardb01: Coerced Size: 278.464 GB [0x22cee000 Sectors]
lunardb01: Firmware state: Online, Spun Up
lunardb01: Is Commissioned Spare : NO
lunardb01: Device Firmware Level: A2B0
lunardb01: Shield Counter: 0

```

```

lunardb01: Successful diagnostics completion on : N/A
lunardb01: SAS Address(0): 0x5000cca0259dd9f1
lunardb01: SAS Address(1): 0x0
lunardb01: Connected Port Number: 1(path0)
lunardb01: Inquiry Data: HITACHI H106030SDSUN300GA2B01218NTU5ZB
lunardb01: FDE Enable: Disable
lunardb01: Secured: Unsecured
lunardb01: Locked: Unlocked
lunardb01: Needs EKM Attention: No
lunardb01: Foreign State: None
lunardb01: Device Speed: 6.0Gb/s
lunardb01: Link Speed: 6.0Gb/s
lunardb01: Media Type: Hard Disk Device
lunardb01: Drive Temperature :24C (75.20 F)
lunardb01: PI Eligibility: No
lunardb01: Drive is formatted for PI information: No
lunardb01: PI: No PI
lunardb01: Drive's write cache : Disabled
lunardb01: Port-0 :
lunardb01: Port status: Active
lunardb01: Port's Linkspeed: 6.0Gb/s
lunardb01: Port-1 :
lunardb01: Port status: Active
lunardb01: Port's Linkspeed: Unknown
lunardb01: Drive has flagged a S.M.A.R.T alert : No
lunardb01:
lunardb01:
lunardb01:
lunardb01: Virtual Drive: 2 (Target Id: 2)
lunardb01: Name :
lunardb01: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunardb01: Size : 278.464 GB
lunardb01: Parity Size : 0
lunardb01: State : Optimal
lunardb01: Strip Size : 1.0 MB
lunardb01: Number Of Drives : 1
lunardb01: Span Depth : 1
lunardb01: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunardb01: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunardb01: Default Access Policy: Read/Write
lunardb01: Current Access Policy: Read/Write
lunardb01: Disk Cache Policy : Disabled
lunardb01: Encryption Type : None
lunardb01: Is VD Cached: No
lunardb01: Number of Spans: 1
lunardb01: Span: 0 - Number of PDs: 1
lunardb01:
lunardb01: PD: 0 Information
lunardb01: Enclosure Device ID: 252
lunardb01: Slot Number: 3
lunardb01: Drive's position: DiskGroup: 2, Span: 0, Arm: 0
lunardb01: Enclosure position: 0
lunardb01: Device Id: 7
lunardb01: WWN: 5000CCA0259DD67F
lunardb01: Sequence Number: 2
lunardb01: Media Error Count: 0
lunardb01: Other Error Count: 0
lunardb01: Predictive Failure Count: 0
lunardb01: Last Predictive Failure Event Seq Number: 0
lunardb01: PD Type: SAS
lunardb01: Raw Size: 279.396 GB [0x22ecb25c Sectors]

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lunardb01: Non Coerced Size: 278.896 GB [0x22dcb25c Sectors]
lunardb01: Coerced Size: 278.464 GB [0x22cee000 Sectors]
lunardb01: Firmware state: Online, Spun Up
lunardb01: Is Commissioned Spare : NO
lunardb01: Device Firmware Level: A2B0
lunardb01: Shield Counter: 0
lunardb01: Successful diagnostics completion on : N/A
lunardb01: SAS Address(0): 0x5000cca0259dd67d
lunardb01: SAS Address(1): 0x0
lunardb01: Connected Port Number: 0(path0)
lunardb01: Inquiry Data: HITACHI H106030SDSUN300GA2B01218NTTYVB
lunardb01: FDE Enable: Disable
lunardb01: Secured: Unsecured
lunardb01: Locked: Unlocked
lunardb01: Needs EKM Attention: No
lunardb01: Foreign State: None
lunardb01: Device Speed: 6.0Gb/s
lunardb01: Link Speed: 6.0Gb/s
lunardb01: Media Type: Hard Disk Device
lunardb01: Drive Temperature :25C (77.00 F)
lunardb01: PI Eligibility: No
lunardb01: Drive is formatted for PI information: No
lunardb01: PI: No PI
lunardb01: Drive's write cache : Disabled
lunardb01: Port-0 :
lunardb01: Port status: Active
lunardb01: Port's Linkspeed: 6.0Gb/s
lunardb01: Port-1 :
lunardb01: Port status: Active
lunardb01: Port's Linkspeed: Unknown
lunardb01: Drive has flagged a S.M.A.R.T alert : No
lunardb01:
lunardb01:
lunardb01:
lunardb01:
lunardb01: Exit Code: 0x00
lunardb02:
lunardb02: Adapter #0
lunardb02:
lunardb02: Number of Virtual Disks: 3
lunardb02: Virtual Drive: 0 (Target Id: 0)
lunardb02: Name :DBSYS
lunardb02: RAID Level : Primary-1, Secondary-0, RAID Level Qualifier-0
lunardb02: Size : 278.464 GB
lunardb02: Mirror Data : 278.464 GB
lunardb02: State : Optimal
lunardb02: Strip Size : 1.0 MB
lunardb02: Number Of Drives : 2
lunardb02: Span Depth : 1
lunardb02: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunardb02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunardb02: Default Access Policy: Read/Write
lunardb02: Current Access Policy: Read/Write
lunardb02: Disk Cache Policy : Disabled
lunardb02: Encryption Type : None
lunardb02: Is VD Cached: No
lunardb02: Number of Spans: 1
lunardb02: Span: 0 - Number of PDs: 2
lunardb02:
lunardb02: PD: 0 Information
lunardb02: Enclosure Device ID: 252

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lunardb02: Slot Number: 0
lunardb02: Drive's postion: DiskGroup: 0, Span: 0, Arm: 0
lunardb02: Enclosure position: 0
lunardb02: Device Id: 9
lunardb02: WWN: 5000CCA0259C303F
lunardb02: Sequence Number: 2
lunardb02: Media Error Count: 0
lunardb02: Other Error Count: 0
lunardb02: Predictive Failure Count: 0
lunardb02: Last Predictive Failure Event Seq Number: 0
lunardb02: PD Type: SAS
lunardb02: Raw Size: 279.396 GB [0x22ecb25c Sectors]
lunardb02: Non Coerced Size: 278.896 GB [0x22dcb25c Sectors]
lunardb02: Coerced Size: 278.464 GB [0x22cee000 Sectors]
lunardb02: Firmware state: Online, Spun Up
lunardb02: Is Commissioned Spare : NO
lunardb02: Device Firmware Level: A2B0
lunardb02: Shield Counter: 0
lunardb02: Successful diagnostics completion on : N/A
lunardb02: SAS Address(0): 0x5000cca0259c303d
lunardb02: SAS Address(1): 0x0
lunardb02: Connected Port Number: 3(path0)
lunardb02: Inquiry Data: HITACHI H106030SDSUN300GA2B01218NSWV3B
lunardb02: FDE Enable: Disable
lunardb02: Secured: Unsecured
lunardb02: Locked: Unlocked
lunardb02: Needs EKM Attention: No
lunardb02: Foreign State: None
lunardb02: Device Speed: 6.0Gb/s
lunardb02: Link Speed: 6.0Gb/s
lunardb02: Media Type: Hard Disk Device
lunardb02: Drive Temperature :24C (75.20 F)
lunardb02: PI Eligibility: No
lunardb02: Drive is formatted for PI information: No
lunardb02: PI: No PI
lunardb02: Drive's write cache : Disabled
lunardb02: Port-0 :
lunardb02: Port status: Active
lunardb02: Port's Linkspeed: 6.0Gb/s
lunardb02: Port-1 :
lunardb02: Port status: Active
lunardb02: Port's Linkspeed: Unknown
lunardb02: Drive has flagged a S.M.A.R.T alert : No
lunardb02:
lunardb02:
lunardb02:
lunardb02:
lunardb02: PD: 1 Information
lunardb02: Enclosure Device ID: 252
lunardb02: Slot Number: 1
lunardb02: Drive's postion: DiskGroup: 0, Span: 0, Arm: 1
lunardb02: Enclosure position: 0
lunardb02: Device Id: 11
lunardb02: WWN: 5000CCA0259C26DB
lunardb02: Sequence Number: 2
lunardb02: Media Error Count: 0
lunardb02: Other Error Count: 0
lunardb02: Predictive Failure Count: 0
lunardb02: Last Predictive Failure Event Seq Number: 0
lunardb02: PD Type: SAS
lunardb02: Raw Size: 279.396 GB [0x22ecb25c Sectors]
lunardb02: Non Coerced Size: 278.896 GB [0x22dcb25c Sectors]
lunardb02: Coerced Size: 278.464 GB [0x22cee000 Sectors]

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lunardb02: Firmware state: Online, Spun Up
lunardb02: Is Commissioned Spare : NO
lunardb02: Device Firmware Level: A2B0
lunardb02: Shield Counter: 0
lunardb02: Successful diagnostics completion on : N/A
lunardb02: SAS Address(0): 0x5000cca0259c26d9
lunardb02: SAS Address(1): 0x0
lunardb02: Connected Port Number: 2(path0)
lunardb02: Inquiry Data: HITACHI H106030SDSUN300GA2B01218NSW6RB
lunardb02: FDE Enable: Disable
lunardb02: Secured: Unsecured
lunardb02: Locked: Unlocked
lunardb02: Needs EKM Attention: No
lunardb02: Foreign State: None
lunardb02: Device Speed: 6.0Gb/s
lunardb02: Link Speed: 6.0Gb/s
lunardb02: Media Type: Hard Disk Device
lunardb02: Drive Temperature :24C (75.20 F)
lunardb02: PI Eligibility: No
lunardb02: Drive is formatted for PI information: No
lunardb02: PI: No PI
lunardb02: Drive's write cache : Disabled
lunardb02: Port-0 :
lunardb02: Port status: Active
lunardb02: Port's Linkspeed: 6.0Gb/s
lunardb02: Port-1 :
lunardb02: Port status: Active
lunardb02: Port's Linkspeed: Unknown
lunardb02: Drive has flagged a S.M.A.R.T alert : No
lunardb02:
lunardb02:
lunardb02: Virtual Drive: 1 (Target Id: 1)
lunardb02: Name :
lunardb02: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunardb02: Size : 278.464 GB
lunardb02: Parity Size : 0
lunardb02: State : Optimal
lunardb02: Strip Size : 1.0 MB
lunardb02: Number Of Drives : 1
lunardb02: Span Depth : 1
lunardb02: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunardb02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunardb02: Default Access Policy: Read/Write
lunardb02: Current Access Policy: Read/Write
lunardb02: Disk Cache Policy : Disabled
lunardb02: Encryption Type : None
lunardb02: Is VD Cached: No
lunardb02: Number of Spans: 1
lunardb02: Span: 0 - Number of PDs: 1
lunardb02:
lunardb02: PD: 0 Information
lunardb02: Enclosure Device ID: 252
lunardb02: Slot Number: 2
lunardb02: Drive's position: DiskGroup: 1, Span: 0, Arm: 0
lunardb02: Enclosure position: 0
lunardb02: Device Id: 10
lunardb02: WWN: 5000CCA0259AA15B
lunardb02: Sequence Number: 2
lunardb02: Media Error Count: 0
lunardb02: Other Error Count: 0

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lunardb02: Predictive Failure Count: 0
lunardb02: Last Predictive Failure Event Seq Number: 0
lunardb02: PD Type: SAS
lunardb02: Raw Size: 279.396 GB [0x22ecb25c Sectors]
lunardb02: Non Coerced Size: 278.896 GB [0x22dcb25c Sectors]
lunardb02: Coerced Size: 278.464 GB [0x22cee000 Sectors]
lunardb02: Firmware state: Online, Spun Up
lunardb02: Is Commissioned Spare : NO
lunardb02: Device Firmware Level: A2B0
lunardb02: Shield Counter: 0
lunardb02: Successful diagnostics completion on : N/A
lunardb02: SAS Address(0): 0x5000cca0259aa159
lunardb02: SAS Address(1): 0x0
lunardb02: Connected Port Number: 1(path0)
lunardb02: Inquiry Data: HITACHI H106030SDSUN300GA2B01218NS18LB
lunardb02: FDE Enable: Disable
lunardb02: Secured: Unsecured
lunardb02: Locked: Unlocked
lunardb02: Needs EKM Attention: No
lunardb02: Foreign State: None
lunardb02: Device Speed: 6.0Gb/s
lunardb02: Link Speed: 6.0Gb/s
lunardb02: Media Type: Hard Disk Device
lunardb02: Drive Temperature :25C (77.00 F)
lunardb02: PI Eligibility: No
lunardb02: Drive is formatted for PI information: No
lunardb02: PI: No PI
lunardb02: Drive's write cache : Disabled
lunardb02: Port-0 :
lunardb02: Port status: Active
lunardb02: Port's Linkspeed: 6.0Gb/s
lunardb02: Port-1 :
lunardb02: Port status: Active
lunardb02: Port's Linkspeed: Unknown
lunardb02: Drive has flagged a S.M.A.R.T alert : No
lunardb02:
lunardb02:
lunardb02:
lunardb02: Virtual Drive: 2 (Target Id: 2)
lunardb02: Name :
lunardb02: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunardb02: Size : 278.464 GB
lunardb02: Parity Size : 0
lunardb02: State : Optimal
lunardb02: Strip Size : 1.0 MB
lunardb02: Number Of Drives : 1
lunardb02: Span Depth : 1
lunardb02: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunardb02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunardb02: Default Access Policy: Read/Write
lunardb02: Current Access Policy: Read/Write
lunardb02: Disk Cache Policy : Disabled
lunardb02: Encryption Type : None
lunardb02: Is VD Cached: No
lunardb02: Number of Spans: 1
lunardb02: Span: 0 - Number of PDs: 1
lunardb02:
lunardb02: PD: 0 Information
lunardb02: Enclosure Device ID: 252
lunardb02: Slot Number: 3
lunardb02: Drive's position: DiskGroup: 2, Span: 0, Arm: 0

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lunardb02: Enclosure position: 0
lunardb02: Device Id: 8
lunardb02: WWN: 5000CCA0259DCF6B
lunardb02: Sequence Number: 2
lunardb02: Media Error Count: 0
lunardb02: Other Error Count: 0
lunardb02: Predictive Failure Count: 0
lunardb02: Last Predictive Failure Event Seq Number: 0
lunardb02: PD Type: SAS
lunardb02: Raw Size: 279.396 GB [0x22ecb25c Sectors]
lunardb02: Non Coerced Size: 278.896 GB [0x22dcb25c Sectors]
lunardb02: Coerced Size: 278.464 GB [0x22cee000 Sectors]
lunardb02: Firmware state: Online, Spun Up
lunardb02: Is Commissioned Spare : NO
lunardb02: Device Firmware Level: A2B0
lunardb02: Shield Counter: 0
lunardb02: Successful diagnostics completion on : N/A
lunardb02: SAS Address(0): 0x5000cca0259dcf69
lunardb02: SAS Address(1): 0x0
lunardb02: Connected Port Number: 0(path0)
lunardb02: Inquiry Data: HITACHI H106030SDSUN300GA2B01218NTTH7B
lunardb02: FDE Enable: Disable
lunardb02: Secured: Unsecured
lunardb02: Locked: Unlocked
lunardb02: Needs EKM Attention: No
lunardb02: Foreign State: None
lunardb02: Device Speed: 6.0Gb/s
lunardb02: Link Speed: 6.0Gb/s
lunardb02: Media Type: Hard Disk Device
lunardb02: Drive Temperature :25C (77.00 F)
lunardb02: PI Eligibility: No
lunardb02: Drive is formatted for PI information: No
lunardb02: PI: No PI
lunardb02: Drive's write cache : Disabled
lunardb02: Port-0 :
lunardb02: Port status: Active
lunardb02: Port's Linkspeed: 6.0Gb/s
lunardb02: Port-1 :
lunardb02: Port status: Active
lunardb02: Port's Linkspeed: Unknown
lunardb02: Drive has flagged a S.M.A.R.T alert : No
lunardb02:
lunardb02:
lunardb02:
lunardb02:
lunardb02: Exit Code: 0x00

```

检测结果：正常

4.4 本地硬盘检查

```

[root@lunardb01 oracle]# dcli -g dbs_group -l root /opt/MegaRAID/MegaCli/MegaCli64 -
PDLlist -a0
lunardb01:
lunardb01: Adapter #0
lunardb01:
lunardb01: Enclosure Device ID: 252
lunardb01: Slot Number: 0
lunardb01: Drive's position: DiskGroup: 0, Span: 0, Arm: 0
lunardb01: Enclosure position: 0
lunardb01: Device Id: 9
lunardb01: WWN: 5000CCA0259BD6E7
lunardb01: Sequence Number: 2

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lunardb01: Media Error Count: 0
lunardb01: Other Error Count: 0
lunardb01: Predictive Failure Count: 0
lunardb01: Last Predictive Failure Event Seq Number: 0
lunardb01: PD Type: SAS
lunardb01: Raw Size: 279.396 GB [0x22ecb25c Sectors]
lunardb01: Non Coerced Size: 278.896 GB [0x22dcb25c Sectors]
lunardb01: Coerced Size: 278.464 GB [0x22cee000 Sectors]
lunardb01: Firmware state: Online, Spun Up
lunardb01: Is Commissioned Spare : NO
lunardb01: Device Firmware Level: A2B0
lunardb01: Shield Counter: 0
lunardb01: Successful diagnostics completion on : N/A
lunardb01: SAS Address(0): 0x5000cca0259bd6e5
lunardb01: SAS Address(1): 0x0
lunardb01: Connected Port Number: 3(path0)
lunardb01: Inquiry Data: HITACHI H106030SDSUN300GA2B01218NSPWNB
lunardb01: FDE Enable: Disable
lunardb01: Secured: Unsecured
lunardb01: Locked: Unlocked
lunardb01: Needs EKM Attention: No
lunardb01: Foreign State: None
lunardb01: Device Speed: 6.0Gb/s
lunardb01: Link Speed: 6.0Gb/s
lunardb01: Media Type: Hard Disk Device
lunardb01: Drive Temperature :24C (75.20 F)
lunardb01: PI Eligibility: No
lunardb01: Drive is formatted for PI information: No
lunardb01: PI: No PI
lunardb01: Drive's write cache : Disabled
lunardb01: Port-0 :
lunardb01: Port status: Active
lunardb01: Port's Linkspeed: 6.0Gb/s
lunardb01: Port-1 :
lunardb01: Port status: Active
lunardb01: Port's Linkspeed: Unknown
lunardb01: Drive has flagged a S.M.A.R.T alert : No
lunardb01:
lunardb01:
lunardb01:
lunardb01: Enclosure Device ID: 252
lunardb01: Slot Number: 1
lunardb01: Drive's position: DiskGroup: 0, Span: 0, Arm: 1
lunardb01: Enclosure position: 0
lunardb01: Device Id: 8
lunardb01: WWN: 5000CCA025953633
lunardb01: Sequence Number: 2
lunardb01: Media Error Count: 0
lunardb01: Other Error Count: 0
lunardb01: Predictive Failure Count: 0
lunardb01: Last Predictive Failure Event Seq Number: 0
lunardb01: PD Type: SAS
lunardb01: Raw Size: 279.396 GB [0x22ecb25c Sectors]
lunardb01: Non Coerced Size: 278.896 GB [0x22dcb25c Sectors]
lunardb01: Coerced Size: 278.464 GB [0x22cee000 Sectors]
lunardb01: Firmware state: Online, Spun Up
lunardb01: Is Commissioned Spare : NO
lunardb01: Device Firmware Level: A2B0
lunardb01: Shield Counter: 0
lunardb01: Successful diagnostics completion on : N/A
lunardb01: SAS Address(0): 0x5000cca025953631
lunardb01: SAS Address(1): 0x0
lunardb01: Connected Port Number: 2(path0)

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lunardb01: Inquiry Data: HITACHI H106030SDSUN300GA2B01218NN1WTB
lunardb01: FDE Enable: Disable
lunardb01: Secured: Unsecured
lunardb01: Locked: Unlocked
lunardb01: Needs EKM Attention: No
lunardb01: Foreign State: None
lunardb01: Device Speed: 6.0Gb/s
lunardb01: Link Speed: 6.0Gb/s
lunardb01: Media Type: Hard Disk Device
lunardb01: Drive Temperature :24C (75.20 F)
lunardb01: PI Eligibility: No
lunardb01: Drive is formatted for PI information: No
lunardb01: PI: No PI
lunardb01: Drive's write cache : Disabled
lunardb01: Port-0 :
lunardb01: Port status: Active
lunardb01: Port's Linkspeed: 6.0Gb/s
lunardb01: Port-1 :
lunardb01: Port status: Active
lunardb01: Port's Linkspeed: Unknown
lunardb01: Drive has flagged a S.M.A.R.T alert : No
lunardb01:
lunardb01:
lunardb01:
lunardb01: Enclosure Device ID: 252
lunardb01: Slot Number: 2
lunardb01: Drive's position: DiskGroup: 1, Span: 0, Arm: 0
lunardb01: Enclosure position: 0
lunardb01: Device Id: 10
lunardb01: WWN: 5000CCA0259DD9F3
lunardb01: Sequence Number: 2
lunardb01: Media Error Count: 0
lunardb01: Other Error Count: 0
lunardb01: Predictive Failure Count: 0
lunardb01: Last Predictive Failure Event Seq Number: 0
lunardb01: PD Type: SAS
lunardb01: Raw Size: 279.396 GB [0x22ecb25c Sectors]
lunardb01: Non Coerced Size: 278.896 GB [0x22dcb25c Sectors]
lunardb01: Coerced Size: 278.464 GB [0x22cee000 Sectors]
lunardb01: Firmware state: Online, Spun Up
lunardb01: Is Commissioned Spare : NO
lunardb01: Device Firmware Level: A2B0
lunardb01: Shield Counter: 0
lunardb01: Successful diagnostics completion on : N/A
lunardb01: SAS Address(0): 0x5000cca0259dd9f1
lunardb01: SAS Address(1): 0x0
lunardb01: Connected Port Number: 1(path0)
lunardb01: Inquiry Data: HITACHI H106030SDSUN300GA2B01218NTU5ZB
lunardb01: FDE Enable: Disable
lunardb01: Secured: Unsecured
lunardb01: Locked: Unlocked
lunardb01: Needs EKM Attention: No
lunardb01: Foreign State: None
lunardb01: Device Speed: 6.0Gb/s
lunardb01: Link Speed: 6.0Gb/s
lunardb01: Media Type: Hard Disk Device
lunardb01: Drive Temperature :24C (75.20 F)
lunardb01: PI Eligibility: No
lunardb01: Drive is formatted for PI information: No
lunardb01: PI: No PI
lunardb01: Drive's write cache : Disabled
lunardb01: Port-0 :
lunardb01: Port status: Active

```

```

lunardb01: Port's Linkspeed: 6.0Gb/s
lunardb01: Port-1 :
lunardb01: Port status: Active
lunardb01: Port's Linkspeed: Unknown
lunardb01: Drive has flagged a S.M.A.R.T alert : No
lunardb01:
lunardb01:
lunardb01:
lunardb01: Enclosure Device ID: 252
lunardb01: Slot Number: 3
lunardb01: Drive's position: DiskGroup: 2, Span: 0, Arm: 0
lunardb01: Enclosure position: 0
lunardb01: Device Id: 7
lunardb01: WWN: 5000CCA0259DD67F
lunardb01: Sequence Number: 2
lunardb01: Media Error Count: 0
lunardb01: Other Error Count: 0
lunardb01: Predictive Failure Count: 0
lunardb01: Last Predictive Failure Event Seq Number: 0
lunardb01: PD Type: SAS
lunardb01: Raw Size: 279.396 GB [0x22ecb25c Sectors]
lunardb01: Non Coerced Size: 278.896 GB [0x22dcb25c Sectors]
lunardb01: Coerced Size: 278.464 GB [0x22cee000 Sectors]
lunardb01: Firmware state: Online, Spun Up
lunardb01: Is Commissioned Spare : NO
lunardb01: Device Firmware Level: A2B0
lunardb01: Shield Counter: 0
lunardb01: Successful diagnostics completion on : N/A
lunardb01: SAS Address(0): 0x5000cca0259dd67d
lunardb01: SAS Address(1): 0x0
lunardb01: Connected Port Number: 0(path0)
lunardb01: Inquiry Data: HITACHI H106030SDSUN300GA2B01218NTTYVB
lunardb01: FDE Enable: Disable
lunardb01: Secured: Unsecured
lunardb01: Locked: Unlocked
lunardb01: Needs EKM Attention: No
lunardb01: Foreign State: None
lunardb01: Device Speed: 6.0Gb/s
lunardb01: Link Speed: 6.0Gb/s
lunardb01: Media Type: Hard Disk Device
lunardb01: Drive Temperature :26C (78.80 F)
lunardb01: PI Eligibility: No
lunardb01: Drive is formatted for PI information: No
lunardb01: PI: No PI
lunardb01: Drive's write cache : Disabled
lunardb01: Port-0 :
lunardb01: Port status: Active
lunardb01: Port's Linkspeed: 6.0Gb/s
lunardb01: Port-1 :
lunardb01: Port status: Active
lunardb01: Port's Linkspeed: Unknown
lunardb01: Drive has flagged a S.M.A.R.T alert : No
lunardb01:
lunardb01:
lunardb01:
lunardb01: Exit Code: 0x00
lunardb02:
lunardb02: Adapter #0
lunardb02:
lunardb02: Enclosure Device ID: 252
lunardb02: Slot Number: 0
lunardb02: Drive's position: DiskGroup: 0, Span: 0, Arm: 0

```

```

lunardb02: Enclosure position: 0
lunardb02: Device Id: 9
lunardb02: WWN: 5000CCA0259C303F
lunardb02: Sequence Number: 2
lunardb02: Media Error Count: 0
lunardb02: Other Error Count: 0
lunardb02: Predictive Failure Count: 0
lunardb02: Last Predictive Failure Event Seq Number: 0
lunardb02: PD Type: SAS
lunardb02: Raw Size: 279.396 GB [0x22ecb25c Sectors]
lunardb02: Non Coerced Size: 278.896 GB [0x22dcb25c Sectors]
lunardb02: Coerced Size: 278.464 GB [0x22cee000 Sectors]
lunardb02: Firmware state: Online, Spun Up
lunardb02: Is Commissioned Spare : NO
lunardb02: Device Firmware Level: A2B0
lunardb02: Shield Counter: 0
lunardb02: Successful diagnostics completion on : N/A
lunardb02: SAS Address(0): 0x5000cca0259c303d
lunardb02: SAS Address(1): 0x0
lunardb02: Connected Port Number: 3(path0)
lunardb02: Inquiry Data: HITACHI H106030SDSUN300GA2B01218NSWV3B
lunardb02: FDE Enable: Disable
lunardb02: Secured: Unsecured
lunardb02: Locked: Unlocked
lunardb02: Needs EKM Attention: No
lunardb02: Foreign State: None
lunardb02: Device Speed: 6.0Gb/s
lunardb02: Link Speed: 6.0Gb/s
lunardb02: Media Type: Hard Disk Device
lunardb02: Drive Temperature :25C (77.00 F)
lunardb02: PI Eligibility: No
lunardb02: Drive is formatted for PI information: No
lunardb02: PI: No PI
lunardb02: Drive's write cache : Disabled
lunardb02: Port-0 :
lunardb02: Port status: Active
lunardb02: Port's Linkspeed: 6.0Gb/s
lunardb02: Port-1 :
lunardb02: Port status: Active
lunardb02: Port's Linkspeed: Unknown
lunardb02: Drive has flagged a S.M.A.R.T alert : No
lunardb02:
lunardb02:
lunardb02:
lunardb02: Enclosure Device ID: 252
lunardb02: Slot Number: 1
lunardb02: Drive's position: DiskGroup: 0, Span: 0, Arm: 1
lunardb02: Enclosure position: 0
lunardb02: Device Id: 11
lunardb02: WWN: 5000CCA0259C26DB
lunardb02: Sequence Number: 2
lunardb02: Media Error Count: 0
lunardb02: Other Error Count: 0
lunardb02: Predictive Failure Count: 0
lunardb02: Last Predictive Failure Event Seq Number: 0
lunardb02: PD Type: SAS
lunardb02: Raw Size: 279.396 GB [0x22ecb25c Sectors]
lunardb02: Non Coerced Size: 278.896 GB [0x22dcb25c Sectors]
lunardb02: Coerced Size: 278.464 GB [0x22cee000 Sectors]
lunardb02: Firmware state: Online, Spun Up
lunardb02: Is Commissioned Spare : NO
lunardb02: Device Firmware Level: A2B0
lunardb02: Shield Counter: 0

```

```

lunardb02: Successful diagnostics completion on : N/A
lunardb02: SAS Address(0): 0x5000cca0259c26d9
lunardb02: SAS Address(1): 0x0
lunardb02: Connected Port Number: 2(path0)
lunardb02: Inquiry Data: HITACHI H106030SDSUN300GA2B01218NSW6RB
lunardb02: FDE Enable: Disable
lunardb02: Secured: Unsecured
lunardb02: Locked: Unlocked
lunardb02: Needs EKM Attention: No
lunardb02: Foreign State: None
lunardb02: Device Speed: 6.0Gb/s
lunardb02: Link Speed: 6.0Gb/s
lunardb02: Media Type: Hard Disk Device
lunardb02: Drive Temperature :25C (77.00 F)
lunardb02: PI Eligibility: No
lunardb02: Drive is formatted for PI information: No
lunardb02: PI: No PI
lunardb02: Drive's write cache : Disabled
lunardb02: Port-0 :
lunardb02: Port status: Active
lunardb02: Port's Linkspeed: 6.0Gb/s
lunardb02: Port-1 :
lunardb02: Port status: Active
lunardb02: Port's Linkspeed: Unknown
lunardb02: Drive has flagged a S.M.A.R.T alert : No
lunardb02:
lunardb02:
lunardb02:
lunardb02: Enclosure Device ID: 252
lunardb02: Slot Number: 2
lunardb02: Drive's postion: DiskGroup: 1, Span: 0, Arm: 0
lunardb02: Enclosure position: 0
lunardb02: Device Id: 10
lunardb02: WWN: 5000CCA0259AA15B
lunardb02: Sequence Number: 2
lunardb02: Media Error Count: 0
lunardb02: Other Error Count: 0
lunardb02: Predictive Failure Count: 0
lunardb02: Last Predictive Failure Event Seq Number: 0
lunardb02: PD Type: SAS
lunardb02: Raw Size: 279.396 GB [0x22ecb25c Sectors]
lunardb02: Non Coerced Size: 278.896 GB [0x22dcb25c Sectors]
lunardb02: Coerced Size: 278.464 GB [0x22cee000 Sectors]
lunardb02: Firmware state: Online, Spun Up
lunardb02: Is Commissioned Spare : NO
lunardb02: Device Firmware Level: A2B0
lunardb02: Shield Counter: 0
lunardb02: Successful diagnostics completion on : N/A
lunardb02: SAS Address(0): 0x5000cca0259aa159
lunardb02: SAS Address(1): 0x0
lunardb02: Connected Port Number: 1(path0)
lunardb02: Inquiry Data: HITACHI H106030SDSUN300GA2B01218NS18LB
lunardb02: FDE Enable: Disable
lunardb02: Secured: Unsecured
lunardb02: Locked: Unlocked
lunardb02: Needs EKM Attention: No
lunardb02: Foreign State: None
lunardb02: Device Speed: 6.0Gb/s
lunardb02: Link Speed: 6.0Gb/s
lunardb02: Media Type: Hard Disk Device
lunardb02: Drive Temperature :26C (78.80 F)
lunardb02: PI Eligibility: No
lunardb02: Drive is formatted for PI information: No

```

```

lunardb02: PI: No PI
lunardb02: Drive's write cache : Disabled
lunardb02: Port-0 :
lunardb02: Port status: Active
lunardb02: Port's Linkspeed: 6.0Gb/s
lunardb02: Port-1 :
lunardb02: Port status: Active
lunardb02: Port's Linkspeed: Unknown
lunardb02: Drive has flagged a S.M.A.R.T alert : No
lunardb02:
lunardb02:
lunardb02:
lunardb02: Enclosure Device ID: 252
lunardb02: Slot Number: 3
lunardb02: Drive's position: DiskGroup: 2, Span: 0, Arm: 0
lunardb02: Enclosure position: 0
lunardb02: Device Id: 8
lunardb02: WWN: 5000CCA0259DCF6B
lunardb02: Sequence Number: 2
lunardb02: Media Error Count: 0
lunardb02: Other Error Count: 0
lunardb02: Predictive Failure Count: 0
lunardb02: Last Predictive Failure Event Seq Number: 0
lunardb02: PD Type: SAS
lunardb02: Raw Size: 279.396 GB [0x22ecb25c Sectors]
lunardb02: Non Coerced Size: 278.896 GB [0x22dcb25c Sectors]
lunardb02: Coerced Size: 278.464 GB [0x22cee000 Sectors]
lunardb02: Firmware state: Online, Spun Up
lunardb02: Is Commissioned Spare : NO
lunardb02: Device Firmware Level: A2B0
lunardb02: Shield Counter: 0
lunardb02: Successful diagnostics completion on : N/A
lunardb02: SAS Address(0): 0x5000cca0259dcf69
lunardb02: SAS Address(1): 0x0
lunardb02: Connected Port Number: 0(path0)
lunardb02: Inquiry Data: HITACHI H106030SDSUN300GA2B01218NTTH7B
lunardb02: FDE Enable: Disable
lunardb02: Secured: Unsecured
lunardb02: Locked: Unlocked
lunardb02: Needs EKM Attention: No
lunardb02: Foreign State: None
lunardb02: Device Speed: 6.0Gb/s
lunardb02: Link Speed: 6.0Gb/s
lunardb02: Media Type: Hard Disk Device
lunardb02: Drive Temperature :26C (78.80 F)
lunardb02: PI Eligibility: No
lunardb02: Drive is formatted for PI information: No
lunardb02: PI: No PI
lunardb02: Drive's write cache : Disabled
lunardb02: Port-0 :
lunardb02: Port status: Active
lunardb02: Port's Linkspeed: 6.0Gb/s
lunardb02: Port-1 :
lunardb02: Port status: Active
lunardb02: Port's Linkspeed: Unknown
lunardb02: Drive has flagged a S.M.A.R.T alert : No
lunardb02:
lunardb02:
lunardb02:
lunardb02: Exit Code: 0x00

```

```

root@lunardb01 oracle]# dcli -g dbs_group -l root
/opt/oracle.SupportTools/reclaimdisks.sh -check
lunardb01: [INFO] This is SUN FIRE X4170 M2 SERVER machine
lunardb01: [INFO] Number of LSI controllers: 1
lunardb01: [INFO] Physical disks found: 4 (252:0 252:1 252:2 252:3)
lunardb01: [INFO] Logical drives found: 3
lunardb01: [INFO] Dual boot installation: yes
lunardb01: [INFO] Linux logical drive: 0
lunardb01: [INFO] RAID Level for the Linux logical drive: 1
lunardb01: [INFO] Physical disks in the Linux logical drive: 2 (252:0 252:1)
lunardb01: [INFO] Dedicated Hot Spares for the Linux logical drive: 0
lunardb01: [INFO] Global Hot Spares: 0
lunardb01: [INFO] Valid dual boot configuration found for Linux: RAID1 from 2 disks
lunardb02: [INFO] This is SUN FIRE X4170 M2 SERVER machine
lunardb02: [INFO] Number of LSI controllers: 1
lunardb02: [INFO] Physical disks found: 4 (252:0 252:1 252:2 252:3)
lunardb02: [INFO] Logical drives found: 3
lunardb02: [INFO] Dual boot installation: yes
lunardb02: [INFO] Linux logical drive: 0
lunardb02: [INFO] RAID Level for the Linux logical drive: 1
lunardb02: [INFO] Physical disks in the Linux logical drive: 2 (252:0 252:1)
lunardb02: [INFO] Dedicated Hot Spares for the Linux logical drive: 0
lunardb02: [INFO] Global Hot Spares: 0
lunardb02: [INFO] Valid dual boot configuration found for Linux: RAID1 from 2 disks

```

```

[root@lunardb01 oracle]# dcli -g dbs_group -l root /opt/MegaRAID/MegaCli/MegaCli64
AdpAllInfo -aALL | grep "Device Present" -A 8
lunardb01: Device Present
lunardb01: =====
lunardb01: Virtual Drives      : 3
lunardb01: Degraded           : 0
lunardb01: Offline            : 0
lunardb01: Physical Devices    : 5
lunardb01: Disks               : 4
lunardb01: Critical Disks     : 0
lunardb01: Failed Disks       : 0
--
lunardb02: Device Present
lunardb02: =====
lunardb02: Virtual Drives      : 3
lunardb02: Degraded           : 0
lunardb02: Offline            : 0
lunardb02: Physical Devices    : 5
lunardb02: Disks               : 4
lunardb02: Critical Disks     : 0
lunardb02: Failed Disks       : 0

```

```

[root@lunardb01 oracle]# dcli -g dbs_group -l root /opt/MegaRAID/MegaCli/MegaCli64
PDList -aALL | grep "Firmware state"
lunardb01: Firmware state: Online, Spun Up
lunardb01: Firmware state: Online, Spun Up
lunardb01: Firmware state: Online, Spun Up
lunardb01: Firmware state: Online, Spun Up
lunardb02: Firmware state: Online, Spun Up
lunardb02: Firmware state: Online, Spun Up
lunardb02: Firmware state: Online, Spun Up
lunardb02: Firmware state: Online, Spun Up

```

```

[root@lunardb01 oracle]# dcli -g dbs_group -l root /opt/MegaRAID/MegaCli/MegaCli64

```

```
-LDInfo -Lall -aALL | grep 'Current Cache Policy'
lunardb01: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunardb01: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunardb01: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunardb02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunardb02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunardb02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
```

检测结果：正常

4.5 本地硬盘前瞻性错误检查

```
[root@lunardb01 oracle]# dcli -g dbs_group -l root
/opt/MegaRAID/MegaCli/MegaCli64 -LdPdInfo -aALL |grep "Predictive Failure Count"
lunardb01: Predictive Failure Count: 0
lunardb01: Predictive Failure Count: 0
lunardb01: Predictive Failure Count: 0
lunardb01: Predictive Failure Count: 0
lunardb02: Predictive Failure Count: 0
lunardb02: Predictive Failure Count: 0
lunardb02: Predictive Failure Count: 0
lunardb02: Predictive Failure Count: 0
```

检测结果：正常

4.6 控制器电池充电状态和温度

```
[root@lunardb01 oracle]# dcli -g dbs_group -l root /opt/MegaRAID/MegaCli/MegaCli64 -
AdpBbuCmd -a0 | grep "Full Charge" -A5 | sort | grep Full -A1
lunardb01: Full Charge Capacity: 1302 mAh
lunardb01: Run time to empty: Battery is not being discharged
--
lunardb02: Full Charge Capacity: 1324 mAh
lunardb02: Run time to empty: Battery is not being discharged
[root@lunardb01 oracle]#
[root@lunardb01 oracle]# dcli -g dbs_group -l root /opt/MegaRAID/MegaCli/MegaCli64 -
AdpBbuCmd -a0 | grep BatteryType
lunardb01: BatteryType: iBBU08
lunardb02: BatteryType: iBBU08
[root@lunardb01 oracle]# dcli -g dbs_group -l root /opt/MegaRAID/MegaCli/MegaCli64 -
AdpBbuCmd -a0 | grep -i temper
lunardb01: Temperature: 42 C
lunardb01: Temperature : OK
lunardb01: Over Temperature : No
lunardb02: Temperature: 38 C
lunardb02: Temperature : OK
lunardb02: Over Temperature : No
```

检测结果：正常

4.7 验证硬件与Firmware是否匹配

```
[root@lunardb01 oracle]# dcli -g dbs_group -l root
/opt/oracle.SupportTools/CheckHWnFWProfile
lunardb01: [SUCCESS] The hardware and firmware profile matches one of the supported
```

```
profiles
lunardb02: [SUCCESS] The hardware and firmware profile matches one of the supported
profiles
```

检测结果：正常

4.8 验证网卡网络连接及网络配置信息

```
# for cable in `ls /sys/class/net | grep ^eth`; do printf "$cable: "; cat
/sys/class/net/$cable/carrier; done
eth0: 1
eth1: 0
eth2: 1
eth3: cat: /sys/cl
ass/net/eth3/carrier: Invalid argument
eth4: cat: /sys/class/net/eth4/carrier: Invalid argument

# ifconfig eth1
eth1      Link encap:Ethernet  HWaddr 00:10:E0:0E:3C:2F
          UP BROADCAST RUNNING SLAVE MULTICAST  MTU:1500
Metric:1
          RX packets:0errors:0 dropped:0 overruns:0 frame:0
          TX packets:350455 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:0(0 MiB)  TX bytes:0(0 MiB)
          Memory:df0e0000-df100000

# ifconfig eth2
eth2      Link encap:Ethernet  HWaddr 00:10:E0:0E:3C:2F
          UP BROADCAST SLAVE MULTICAST  MTU:1500  Metric:1
          RX packets:22195792495 errors:0 dropped:0 overruns:50 frame:0
          TX packets:18763311383 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:15591281761137 (14.1 TiB)  TX bytes:2919601594870 (2.6 TiB)
          Memory:df1e0000-df200000
```

经确认lunardb01和lunardb02主机eth1网卡未连接网线，建议尽快连接否
侧eth2网卡出现问题时公网IP地址不能正常failover到eth1网卡

```
[root@lunardb01 oracle]# cat /etc/hosts
# Do not remove the following line, or various programs
# that require network functionality will fail.
127.0.0.1    localhost.localdomain    localhost

### Compute Node [eth0] Interface details
10.224.150.175  lunardb01.bmcc.com.cn    lunardb01
10.224.150.176  lunardb02.bmcc.com.cn    lunardb02

### Compute Node Client Access [bondeth0] Interface details
10.224.141.177  dm0301.bmcc.com.cn    dm0301
10.224.141.178  dm0302.bmcc.com.cn    dm0302

### Compute Node Client Access VIP [bondeth0] Interface details
10.224.141.179  dm0301-vip.bmcc.com.cn  dm0301-vip
10.224.141.180  dm0302-vip.bmcc.com.cn  dm0302-vip

### Compute Node Client Access SCAN [bondeth0] Interface details
# 10.224.141.181      dm03-scan.bmcc.com.cn    dm03-scan
# 10.224.141.182      dm03-scan.bmcc.com.cn    dm03-scan
# 10.224.141.183      dm03-scan.bmcc.com.cn    dm03-scan
```

```
### Cell Node Admin [eth0] Interface details
10.224.150.177  lunarcel01.bmcc.com.cn  lunarcel01
10.224.150.178  lunarcel02.bmcc.com.cn  lunarcel02
10.224.150.179  lunarcel03.bmcc.com.cn  lunarcel03

### Compute and Cell ILOM [ilom] Interface details
10.224.150.180  lunardb01-ilom.bmcc.com.cn  lunardb01-ilom
10.224.150.181  lunardb02-ilom.bmcc.com.cn  lunardb02-ilom
10.224.150.182  lunarcel01-ilom.bmcc.com.cn  lunarcel01-ilom
10.224.150.183  lunarcel02-ilom.bmcc.com.cn  lunarcel02-ilom
10.224.150.184  lunarcel03-ilom.bmcc.com.cn  lunarcel03-ilom

### Switches on Admin [eth0] Network
10.224.150.185  dm03sw-kvm.bmcc.com.cn  dm03sw-kvm
10.224.150.186  dm03sw-ip.bmcc.com.cn  dm03sw-ip
10.224.150.188  dm03sw-ib2.bmcc.com.cn  dm03sw-ib2
10.224.150.189  dm03sw-ib3.bmcc.com.cn  dm03sw-ib3

### Compute Node Private Interface details
192.168.10.1    lunardb01-priv.bmcc.com.cn  lunardb01-priv
192.168.10.2    lunardb02-priv.bmcc.com.cn  lunardb02-priv

### CELL Node Private Interface details
192.168.10.3    lunarcel01-priv.bmcc.com.cn  lunarcel01-priv
192.168.10.4    lunarcel02-priv.bmcc.com.cn  lunarcel02-priv
192.168.10.5    lunarcel03-priv.bmcc.com.cn  lunarcel03-priv

### Switch details
# The following 5 IP addresses are for reference only. You may
# not be able to reach these IP addresses from this machine
# 10.224.150.185      dm03sw-kvm.bmcc.com.cn  dm03sw-kvm
# 10.224.150.186      dm03sw-ip.bmcc.com.cn  dm03sw-ip
# 10.224.150.188      dm03sw-ib2.bmcc.com.cn  dm03sw-ib2
# 10.224.150.189      dm03sw-ib3.bmcc.com.cn  dm03sw-ib3

#### add by lxj for the wydb
#10.224.133.213 wydb
#10.224.141.248 oem12c
[root@lunardb01 oracle]#
[root@lunardb01 oracle]#
[root@lunardb01 oracle]# netstat -rn
Kernel IP routing table
Destination      Gateway          Genmask         Flags   MSS Window  irtt
Iface
10.224.141.128   0.0.0.0         255.255.255.128 U        0 0          0
bondeth0
10.224.150.128   0.0.0.0         255.255.255.128 U        0 0          0 eth0
192.168.8.0      0.0.0.0         255.255.252.0   U        0 0          0
bondib0
169.254.0.0      0.0.0.0         255.255.0.0     U        0 0          0
bondib0
0.0.0.0          10.224.141.254  0.0.0.0         UG       0 0          0
bondeth0
[root@lunardb01 oracle]#
[root@lunardb01 oracle]# ifconfig -a
__tmp1757640126 Link encap:Ethernet  HWaddr 00:10:E0:0E:3C:30
      BROADCAST MULTICAST  MTU:1500  Metric:1
      RX packets:60280 errors:0 dropped:0 overruns:0 frame:0
      TX packets:47343 errors:0 dropped:0 overruns:0 carrier:0
      collisions:0 txqueuelen:1000
      RX bytes:40138942 (38.2 MiB)  TX bytes:6757735 (6.4 MiB)
      Memory:df160000-df180000
```



```
[root@lunardb01 oracle]# dcli -g dbs_group -l root
/opt/oracle.SupportTools/ibdiagtools/verify-topology -t quarerrack
head: cannot open `VERSION_FILE' for reading: No such file or directory
head: cannot open `VERSION_FILE' for reading: No such file or directory
lunardb01:
lunardb01: [ DB Machine Infiniband Cabling Topology Verification Tool ]
lunardb01: [Version IBD VER 2.c ]
lunardb01:
lunardb01: ----- Quarter Rack Exadata V2 Cabling Check-----
```

```

lunardb01:
lunardb01: Check if all hosts have 2 CAs to different switches.....[SUCCESS]
lunardb01: Leaf switch check: cardinality and even distribution.....[SUCCESS]
lunardb01: Check if each rack has an valid internal ring.....[SUCCESS]
lunardb01:
lunardb02:
lunardb02: [ DB Machine Infiniband Cabling Topology Verification Tool ]
lunardb02: [Version IBD VER 2.c ]
lunardb02:
lunardb02: ----- Quarter Rack Exadata V2 Cabling Check-----
lunardb02:
lunardb02: Check if all hosts have 2 CAs to different switches.....[SUCCESS]
lunardb02: Leaf switch check: cardinality and even distribution.....[SUCCESS]
lunardb02: Check if each rack has an valid internal ring.....[SUCCESS]
lunardb02:

```

检测结果：正常

4.10 验证DB节点与Infiniband交换机连接性

```

# for ib_cable in `ls /sys/class/net | grep ^ib`; do printf "$ib_cable: "; cat
/sys/class/net/$ib_cable/carrier; done
ib0: 1
ib1: 1

```

检测结果：正常

```

[root@lunardb01 oracle]# dcli -g dbs_group -l root ibstat
lunardb01: CA 'mlx4_0'
lunardb01: CA type: MT26428
lunardb01: Number of ports: 2
lunardb01: Firmware version: 2.7.8130
lunardb01: Hardware version: b0
lunardb01: Node GUID: 0x0021280001effb18
lunardb01: System image GUID: 0x0021280001effb1b
lunardb01: Port 1:
lunardb01: State: Active
lunardb01: Physical state: LinkUp
lunardb01: Rate: 40
lunardb01: Base lid: 9
lunardb01: LMC: 0
lunardb01: SM lid: 2
lunardb01: Capability mask: 0x02510868
lunardb01: Port GUID: 0x0021280001effb19
lunardb01: Port 2:
lunardb01: State: Active
lunardb01: Physical state: LinkUp
lunardb01: Rate: 40
lunardb01: Base lid: 10
lunardb01: LMC: 0
lunardb01: SM lid: 2
lunardb01: Capability mask: 0x02510868
lunardb01: Port GUID: 0x0021280001effb1a
lunardb02: CA 'mlx4_0'
lunardb02: CA type: MT26428
lunardb02: Number of ports: 2
lunardb02: Firmware version: 2.7.8130
lunardb02: Hardware version: b0
lunardb02: Node GUID: 0x0021280001eff938
lunardb02: System image GUID: 0x0021280001eff93b
lunardb02: Port 1:
lunardb02: State: Active
lunardb02: Physical state: LinkUp
lunardb02: Rate: 40

```

```
lunardb02: Base lid: 11
lunardb02: LMC: 0
lunardb02: SM lid: 2
lunardb02: Capability mask: 0x02510868
lunardb02: Port GUID: 0x0021280001eff939
lunardb02: Port 2:
lunardb02: State: Active
lunardb02: Physical state: LinkUp
lunardb02: Rate: 40
lunardb02: Base lid: 12
lunardb02: LMC: 0
lunardb02: SM lid: 2
lunardb02: Capability mask: 0x02510868
lunardb02: Port GUID: 0x0021280001eff93a
```

检测结果：正常

```
[root@lunardb01 oracle]# dcli -g dbs_group -l root ibstatus
lunardb01: Infiniband device 'mlx4_0' port 1 status:
lunardb01: default gid:    fe80:0000:0000:0000:0021:2800:01ef:fb19
lunardb01: base lid:      0x9
lunardb01: sm lid:        0x2
lunardb01: state:         4: ACTIVE
lunardb01: phys state:    5: LinkUp
lunardb01: rate:          40 Gb/sec (4X QDR)
lunardb01:
lunardb01: Infiniband device 'mlx4_0' port 2 status:
lunardb01: default gid:    fe80:0000:0000:0000:0021:2800:01ef:fb1a
lunardb01: base lid:      0xa
lunardb01: sm lid:        0x2
lunardb01: state:         4: ACTIVE
lunardb01: phys state:    5: LinkUp
lunardb01: rate:          40 Gb/sec (4X QDR)
lunardb01:
lunardb02: Infiniband device 'mlx4_0' port 1 status:
lunardb02: default gid:    fe80:0000:0000:0000:0021:2800:01ef:f939
lunardb02: base lid:      0xb
lunardb02: sm lid:        0x2
lunardb02: state:         4: ACTIVE
lunardb02: phys state:    5: LinkUp
lunardb02: rate:          40 Gb/sec (4X QDR)
lunardb02:
lunardb02: Infiniband device 'mlx4_0' port 2 status:
lunardb02: default gid:    fe80:0000:0000:0000:0021:2800:01ef:f93a
lunardb02: base lid:      0xc
lunardb02: sm lid:        0x2
lunardb02: state:         4: ACTIVE
lunardb02: phys state:    5: LinkUp
lunardb02: rate:          40 Gb/sec (4X QDR)
lunardb02:
```

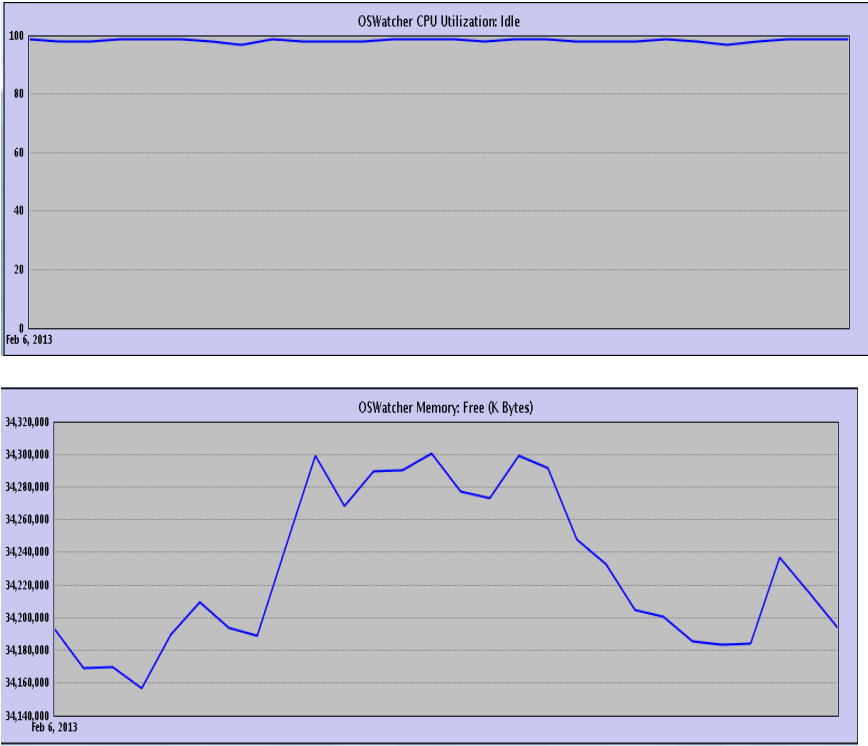
检测结果：正常

4.11 NTP检查

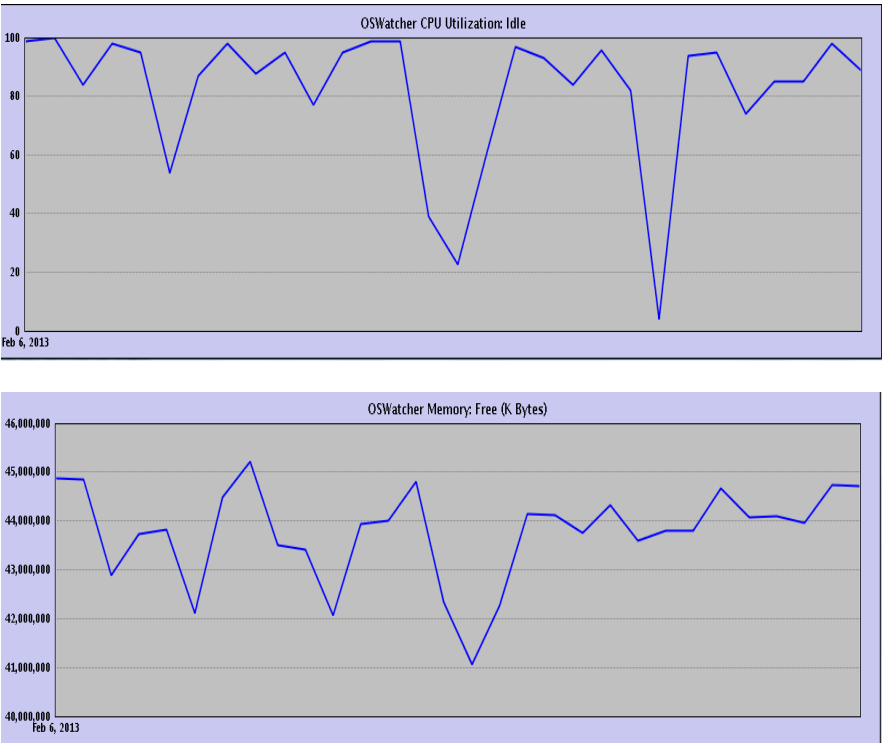


4.12 CPU和内存资源使用情况

节点lunardb01



节点lunardb02



节点lunardb02存在cpu资源消耗殆尽的情况，请加强监控并对峰值时间段进行性能优化

4.13 GRID和DB软件补丁检查

Exadata已安装补丁	建议安装补丁
QUARTERLY DATABASE PATCH FOR EXADATA (OCT 2012 – 11.2.0.3.11) : (14474780)	目前最新为11.2.0.3 BP14，推荐安装

Patch description: "QUARTERLY CRS PATCH FOR EXADATA (OCT 2012 - 11.2.0.3.11) : (14275572)"	目前最新为11.2.0.3 BP14，推荐安装
---	-------------------------

数据库补丁安装清单

XXXXXXXXXX Rac system comprising of multiple nodes Local node = lunardb01 Remote node = lunardb02 ----- OPatch succeeded.
--

Grid软件补丁安装清单

XXXXXXXXXXXXXXXXXXXX Rac system comprising of multiple nodes Local node = lunardb01 Remote node = lunardb02 ----- OPatch succeeded.
--

4.14 DB节点操作系统日志分析

具体见sundiag.sh输出，未发现任何错误信息。

以下日志信息表明eth1网卡网线接通，eth2网卡状态不正常

Feb 5 14:10:21 lunardb01 kernel: igb: eth2 NIC Link is Down
Feb 5 14:10:21 lunardb01 kernel: bonding: bondeth0: link status down for active interface eth2, disabling it in 5000 ms.
Feb 5 14:10:26 lunardb01 kernel: bonding: bondeth0: link status definitely down for interface eth2, disabling it
Feb 5 14:10:26 lunardb01 kernel: bonding: bondeth0: now running without any active interface !
Feb 5 14:10:38 lunardb01 kernel: igb: eth1 NIC Link is Up 1000 Mbps Full Duplex, Flow Control: RX
Feb 5 14:10:38 lunardb01 kernel: bonding: bondeth0: link status up for interface eth1, enabling it in 0 ms.
Feb 5 14:10:38 lunardb01 kernel: bonding: bondeth0: link status definitely up for interface eth1.
Feb 5 14:10:38 lunardb01 kernel: bonding: bondeth0: making interface eth1 the new active one.
Feb 5 14:10:38 lunardb01 kernel: bonding: bondeth0: first active interface up!

4.15 Exachk工具对DB节点健康检查汇总

Status	Type	Message	Status On	Details
FAIL	OS Check	Database Server Disk Controller Configuration does not meet recommendation	All Database Servers	View
FAIL	OS Check	Database Server Physical Drive Configuration does not meet recommendation	All Database Servers	View

FAIL	OS Check	Database Server Virtual Drive Configuration does not meet recommendation	All Database Servers	View
FAIL	OS Check	Operating system hugepages count does not satisfy total SGA requirements	All Database Servers	View
FAIL	OS Check	Database control files are not configured as recommended	All Database Servers	View
FAIL	OS Check	Database parameter Db_create_online_log_dest_n is not set to recommended value	All Database Servers	View
FAIL	OS Check	One or more Ethernet network cables are not connected.	All Database Servers	View
FAIL	OS Check	InfiniBand network error counters are non-zero	All Database Servers	View
WARNING	OS Check	More than one non-ASM instance discovered	All Database Servers	View
WARNING	OS Check	Number of Mounts before a File System check is not set to -1 for system disk	All Database Servers	View
INFO	OS Check	ASM griddisk,diskgroup and Failure group mapping not checked.	All Database Servers	View
PASS	Patch Check	System is not exposed to Exadata Critical Issue DB15	All Homes	View
PASS	Patch Check	System is not exposed to Exadata Critical Issue DB11	All Homes	View
PASS	OS Check	DNS Server ping time is in acceptable range	All Database Servers	View
PASS	Patch Check	SCN Headroom is good BUT see IMPORTANT Details about SCN Headroom	All Homes	View
PASS	OS Check	subnet manager is running on an InfiniBand switch	All Database Servers	View
PASS	OS Check	RAID controller battery condition is good [Database Server]	All Database Servers	View
PASS	OS Check	Address Resolution Protocol (ARP) is configured properly on database server.	All Database Servers	View
PASS	OS Check	Database parameters log_archive_dest_n with Location attribute are all set to recommended value	All Database Servers	View
PASS	OS Check	Database parameter COMPATIBLE is set to recommended value	All Database Servers	View
PASS	OS Check	All InfiniBand network cables are connected	All Database Servers	View
PASS	OS Check	Database parameter db_recovery_file_dest_size is set to recommended value	All Database Servers	View
PASS	OS Check	Database DB_CREATE_FILE_DEST and DB_RECOVERY_FILE_DEST are in different diskgroups	All Database Servers	View
PASS	OS Check	Database parameter CLUSTER_INTERCONNECTS is set to the recommended value	All Database Servers	View
PASS	OS Check	Disk cache policy is set to Disabled on database server	All Database Servers	View
PASS	OS Check	Exadata software version supports Automatic Service Request functionality	All Database Servers	View
PASS	OS Check	Oracle ASM Communication is using RDS protocol on Infiniband Network	All Database Servers	View
PASS	OS Check	Database server disk controllers use writeback cache	All Database Servers	View
PASS	OS Check	Verify-topology executes without any errors or warning	All Database Servers	View
PASS	OS Check	Hardware and firmware profile check is successful. [Database Server]	All Database Servers	View
PASS	OS Check	Local listener init parameter is set to local node VIP	All Database Servers	View
PASS	OS Check	All voting disks are online	All Database Servers	View
PASS	OS Check	ohasd/orarootagent_root Log Ownership is Correct (root root)	All Database Servers	View
PASS	OS Check	Remote listener is set to SCAN name	All Database Servers	View
PASS	OS Check	NTP is running with correct setting	All Database Servers	View
PASS	OS Check	Interconnect is configured on non-routable network addresses	All Database Servers	View
PASS	OS Check	crsd Log Ownership is Correct (root root)	All Database Servers	View
PASS	OS Check	OSWatcher is running	All Database Servers	View
PASS	OS Check	ORA_CRS_HOME environment variable is not set	All Database Servers	View
PASS	OS Check	NIC bonding mode is not set to Broadcast(3) for cluster interconnect	All Database Servers	View
PASS	OS Check	Number of SCAN listeners is equal to the recommended number of 3.	All Database Servers	View
PASS	OS Check	SELinux is not being Enforced.	All Database Servers	View
PASS	OS Check	crsd/orarootagent_root Log Ownership is Correct (root root)	All Database Servers	View
PASS	OS Check	\$ORACLE_HOME/bin/oradism ownership is root	All Database Servers	View
PASS	OS Check	NIC bonding is configured for interconnect	All Database Servers	View
PASS	OS Check	\$ORACLE_HOME/bin/oradism setuid bit is set	All Database Servers	View

PASS	OS Check	ohasd Log Ownership is Correct (root root)	All Database Servers	View
PASS	OS Check	NIC bonding is configured for public network (VIP)	All Database Servers	View
PASS	OS Check	Open files limit (ulimit -n) for current user is set to recommended value >= 65536 or unlimited	All Database Servers	View
PASS	OS Check	NIC bonding mode is not set to Broadcast(3) for public network	All Database Servers	View
PASS	OS Check	Shell limit hard stack for GI is configured according to recommendation	All Database Servers	View
PASS	OS Check	Shell limit soft nproc for DB is configured according to recommendation	All Database Servers	View
PASS	OS Check	Shell limit hard stack for DB is configured according to recommendation	All Database Servers	View
PASS	OS Check	Shell limit hard nfile for DB is configured according to recommendation	All Database Servers	View
PASS	OS Check	Shell limit soft nfile for DB is configured according to recommendation	All Database Servers	View
PASS	OS Check	Shell limit hard nproc for DB is configured according to recommendation	All Database Servers	View
PASS	OS Check	Shell limit hard nproc for GI is configured according to recommendation	All Database Servers	View
PASS	OS Check	Shell limit hard nfile for GI is configured according to recommendation	All Database Servers	View
PASS	OS Check	Shell limit soft nproc for GI is configured according to recommendation	All Database Servers	View
PASS	OS Check	Shell limit soft nfile for GI is configured according to recommendation	All Database Servers	View
PASS	OS Check	Management network is separate from data network	All Database Servers	View
PASS	OS Check	RAID controller battery temperature is normal [Database Server]	All Database Servers	View
PASS	OS Check	System model number is correct	All Database Servers	View
PASS	OS Check	Free space in root(/) filesystem meets or exceeds recommendation.	All Database Servers	View
PASS	OS Check	Oracle RAC Communication is using RDS protocol on Infiniband Network	All Database Servers	View
PASS	OS Check	Database Home is properly linked with RDS library	All Database Servers	View
PASS	OS Check	InfiniBand is the Private Network for Oracle Clusterware Communication	All Database Servers	View
PASS	OS Check	NUMA is OFF at operating system level.	All Database Servers	View
PASS	OS Check	Database Server InfiniBand network MTU size is 65520	All Database Servers	View
PASS	OS Check	Clusterware Home is properly linked with RDS library	All Database Servers	View
PASS	OS Check	CSS misscount is set to the recommended value of 60	All Database Servers	View
PASS	OS Check	Database server InfiniBand network is in "connected" mode.	All Database Servers	View

4.16 数据库节点大页的检查

4.17 数据库节点系统日志的检查

4.18 所有节点（数据库节点和存储节点）时间同步的检查

5. Storage Server

5.1 版本检查

机器型号检查

```
[root@lunardb01 oracle]# dcli -g cell_group -l root dmidecode -s system-product-name
lunarccl01: SUN FIRE X4270 M2 SERVER
lunarccl02: SUN FIRE X4270 M2 SERVER
lunarccl03: SUN FIRE X4270 M2 SERVER
```

Image版本检查

```
[root@lunardb01 oracle]# dcli -g cell_group -l root imageinfo
lunarccl01:
lunarccl01: Kernel version: 2.6.18-274.18.1.0.1.el5 #1 SMP Thu Feb 9 19:07:16 EST
2012 x86_64
lunarccl01: Cell version: OSS_11.2.3.1.1_LINUX.X64_120607
lunarccl01: Cell rpm version: cell-11.2.3.1.1_LINUX.X64_120607-1
lunarccl01:
lunarccl01: Active image version: 11.2.3.1.1.120607
lunarccl01: Active image activated: 2012-08-11 08:30:30 -0700
lunarccl01: Active image status: success
lunarccl01: Active system partition on device: /dev/md5
lunarccl01: Active software partition on device: /dev/md7
lunarccl01:
lunarccl01: In partition rollback: Impossible
lunarccl01:
lunarccl01: Cell boot usb partition: /dev/sdm1
lunarccl01: Cell boot usb version: 11.2.3.1.1.120607
lunarccl01:
lunarccl01: Inactive image version: undefined
lunarccl01: Rollback to the inactive partitions: Impossible
lunarccl02:
lunarccl02: Kernel version: 2.6.18-274.18.1.0.1.el5 #1 SMP Thu Feb 9 19:07:16 EST
2012 x86_64
lunarccl02: Cell version: OSS_11.2.3.1.1_LINUX.X64_120607
lunarccl02: Cell rpm version: cell-11.2.3.1.1_LINUX.X64_120607-1
lunarccl02:
lunarccl02: Active image version: 11.2.3.1.1.120607
lunarccl02: Active image activated: 2012-08-11 08:40:18 -0700
lunarccl02: Active image status: success
lunarccl02: Active system partition on device: /dev/md5
lunarccl02: Active software partition on device: /dev/md7
lunarccl02:
lunarccl02: In partition rollback: Impossible
lunarccl02:
lunarccl02: Cell boot usb partition: /dev/sdm1
lunarccl02: Cell boot usb version: 11.2.3.1.1.120607
lunarccl02:
lunarccl02: Inactive image version: undefined
lunarccl02: Rollback to the inactive partitions: Impossible
lunarccl03:
lunarccl03: Kernel version: 2.6.18-274.18.1.0.1.el5 #1 SMP Thu Feb 9 19:07:16 EST
2012 x86_64
lunarccl03: Cell version: OSS_11.2.3.1.1_LINUX.X64_120607
lunarccl03: Cell rpm version: cell-11.2.3.1.1_LINUX.X64_120607-1
lunarccl03:
lunarccl03: Active image version: 11.2.3.1.1.120607
lunarccl03: Active image activated: 2012-08-11 08:40:24 -0700
lunarccl03: Active image status: success
lunarccl03: Active system partition on device: /dev/md5
```

```

lunarc103: Active software partition on device: /dev/md7
lunarc103:
lunarc103: In partition rollback: Impossible
lunarc103:
lunarc103: Cell boot usb partition: /dev/sdm1
lunarc103: Cell boot usb version: 11.2.3.1.1.120607
lunarc103:
lunarc103: Inactive image version: undefined
lunarc103: Rollback to the inactive partitions: Impossible
[root@lunardb01 oracle]#
[root@lunardb01 oracle]#
[root@lunardb01 oracle]# dcli -g cell_group -l root imagehistory
lunarc101: Version                               : 11.2.3.1.1.120607
lunarc101: Image activation date                 : 2012-08-11 08:30:30 -0700
lunarc101: Imaging mode                         : fresh
lunarc101: Imaging status                       : success
lunarc101:
lunarc102: Version                               : 11.2.3.1.1.120607
lunarc102: Image activation date                 : 2012-08-11 08:40:18 -0700
lunarc102: Imaging mode                         : fresh
lunarc102: Imaging status                       : success
lunarc102:
lunarc103: Version                               : 11.2.3.1.1.120607
lunarc103: Image activation date                 : 2012-08-11 08:40:24 -0700
lunarc103: Imaging mode                         : fresh
lunarc103: Imaging status                       : success
lunarc103:

```

操作系统版本检查

```

[root@lunardb01 oracle]# dcli -g cell_group -l root uname -a
lunarc101: Linux lunarc101.bmcc.com.cn 2.6.18-274.18.1.0.1.el5 #1 SMP Thu Feb 9
19:07:16 EST 2012 x86_64 x86_64 x86_64 GNU/Linux
lunarc102: Linux lunarc102.bmcc.com.cn 2.6.18-274.18.1.0.1.el5 #1 SMP Thu Feb 9
19:07:16 EST 2012 x86_64 x86_64 x86_64 GNU/Linux
lunarc103: Linux lunarc103.bmcc.com.cn 2.6.18-274.18.1.0.1.el5 #1 SMP Thu Feb 9
19:07:16 EST 2012 x86_64 x86_64 x86_64 GNU/Linux
[root@lunardb01 oracle]# dcli -g cell_group -l root cat /etc/oracle-release
lunarc101: Oracle Linux Server release 5.7
lunarc102: Oracle Linux Server release 5.7
lunarc103: Oracle Linux Server release 5.7
[root@lunardb01 oracle]# dcli -g cell_group -l root cat /etc/redhat-release
lunarc101: Red Hat Enterprise Linux Server release 5.7 (Tikanga)
lunarc102: Red Hat Enterprise Linux Server release 5.7 (Tikanga)
lunarc103: Red Hat Enterprise Linux Server release 5.7 (Tikanga)

```

Ofa程序包版本

```

[root@lunardb01 oracle]# dcli -g cell_group -l root rpm -qa|grep ofa
lunarc101: ofa-2.6.18-274.18.1.0.1.el5-1.5.1-4.0.58
lunarc102: ofa-2.6.18-274.18.1.0.1.el5-1.5.1-4.0.58
lunarc103: ofa-2.6.18-274.18.1.0.1.el5-1.5.1-4.0.58

```

HCA卡firmware版本

```

Infiniband HCA firmware version
Firmware version: 2.7.8130

```

检查结果：正常

5.2 本地文件系统剩余空间检查

```

[root@lunardb01 oracle]# dcli -g cell_group -l root df -h

```

lunarcel01: Filesystem	Size	Used	Avail	Use%	Mounted on
lunarcel01: /dev/md5	9.9G	4.4G	5.0G	47%	/
lunarcel01: tmpfs	12G	0	12G	0%	/dev/shm
lunarcel01: /dev/md7	3.0G	711M	2.2G	25%	/opt/oracle
lunarcel01: /dev/md4	116M	55M	55M	50%	/boot
lunarcel01: /dev/md11	5.0G	177M	4.5G	4%	/var/log/oracle
lunarcel02: Filesystem	Size	Used	Avail	Use%	Mounted on
lunarcel02: /dev/md5	9.9G	4.4G	5.0G	47%	/
lunarcel02: tmpfs	12G	0	12G	0%	/dev/shm
lunarcel02: /dev/md7	3.0G	711M	2.2G	25%	/opt/oracle
lunarcel02: /dev/md4	116M	55M	55M	50%	/boot
lunarcel02: /dev/md11	5.0G	179M	4.5G	4%	/var/log/oracle
lunarcel03: Filesystem	Size	Used	Avail	Use%	Mounted on
lunarcel03: /dev/md5	9.9G	4.4G	5.1G	47%	/
lunarcel03: tmpfs	12G	0	12G	0%	/dev/shm
lunarcel03: /dev/md7	3.0G	710M	2.2G	25%	/opt/oracle
lunarcel03: /dev/md4	116M	55M	55M	50%	/boot
lunarcel03: /dev/md11	5.0G	177M	4.5G	4%	/var/log/oracle

检查结果：正常

5.3 控制器检查

```
[root@lunardb01 oracle]# dcli -g cell_group -l root
/opt/MegaRAID/MegaCli/MegaCli64 -LdPdInfo -aALL
lunarcel01:
lunarcel01: Adapter #0
lunarcel01:
lunarcel01: Number of Virtual Disks: 12
lunarcel01: Virtual Drive: 0 (Target Id: 0)
lunarcel01: Name :
lunarcel01: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel01: Size : 2.727 TB
lunarcel01: Parity Size : 0
lunarcel01: State : Optimal
lunarcel01: Strip Size : 1.0 MB
lunarcel01: Number Of Drives : 1
lunarcel01: Span Depth : 1
lunarcel01: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel01: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel01: Default Access Policy: Read/Write
lunarcel01: Current Access Policy: Read/Write
lunarcel01: Disk Cache Policy : Disabled
lunarcel01: Encryption Type : None
lunarcel01: Is VD Cached: No
lunarcel01: Number of Spans: 1
lunarcel01: Span: 0 - Number of PDs: 1
lunarcel01:
lunarcel01: PD: 0 Information
lunarcel01: Enclosure Device ID: 20
lunarcel01: Slot Number: 0
lunarcel01: Drive's position: DiskGroup: 0, Span: 0, Arm: 0
lunarcel01: Enclosure position: 0
lunarcel01: Device Id: 19
lunarcel01: WWN: 5000CCA01AC662C3
lunarcel01: Sequence Number: 2
lunarcel01: Media Error Count: 0
lunarcel01: Other Error Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Last Predictive Failure Event Seq Number: 0
lunarcel01: PD Type: SAS
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lunarcel01: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel01: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel01: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Is Commissioned Spare : NO
lunarcel01: Device Firmware Level: A142
lunarcel01: Shield Counter: 0
lunarcel01: Successful diagnostics completion on : N/A
lunarcel01: SAS Address(0): 0x5000cca01ac662c1
lunarcel01: SAS Address(1): 0x0
lunarcel01: Connected Port Number: 0(path0)
lunarcel01: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RJ382G
lunarcel01: FDE Enable: Disable
lunarcel01: Secured: Unsecured
lunarcel01: Locked: Unlocked
lunarcel01: Needs EKM Attention: No
lunarcel01: Foreign State: None
lunarcel01: Device Speed: 6.0Gb/s
lunarcel01: Link Speed: 6.0Gb/s
lunarcel01: Media Type: Hard Disk Device
lunarcel01: Drive Temperature :26C (78.80 F)
lunarcel01: PI Eligibility: No
lunarcel01: Drive is formatted for PI information: No
lunarcel01: PI: No PI
lunarcel01: Drive's write cache : Disabled
lunarcel01: Port-0 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: 6.0Gb/s
lunarcel01: Port-1 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: Unknown
lunarcel01: Drive has flagged a S.M.A.R.T alert : No
lunarcel01:
lunarcel01:
lunarcel01:
lunarcel01: Virtual Drive: 1 (Target Id: 1)
lunarcel01: Name :
lunarcel01: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel01: Size : 2.727 TB
lunarcel01: Parity Size : 0
lunarcel01: State : Optimal
lunarcel01: Strip Size : 1.0 MB
lunarcel01: Number Of Drives : 1
lunarcel01: Span Depth : 1
lunarcel01: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel01: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel01: Default Access Policy: Read/Write
lunarcel01: Current Access Policy: Read/Write
lunarcel01: Disk Cache Policy : Disabled
lunarcel01: Encryption Type : None
lunarcel01: Is VD Cached: No
lunarcel01: Number of Spans: 1
lunarcel01: Span: 0 - Number of PDs: 1
lunarcel01:
lunarcel01: PD: 0 Information
lunarcel01: Enclosure Device ID: 20
lunarcel01: Slot Number: 1
lunarcel01: Drive's postion: DiskGroup: 1, Span: 0, Arm: 0
lunarcel01: Enclosure position: 0
lunarcel01: Device Id: 18
lunarcel01: WWN: 5000CCA01AC97E43

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lunarcel01: Sequence Number: 2
lunarcel01: Media Error Count: 0
lunarcel01: Other Error Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Last Predictive Failure Event Seq Number: 0
lunarcel01: PD Type: SAS
lunarcel01: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel01: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel01: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Is Commissioned Spare : NO
lunarcel01: Device Firmware Level: A142
lunarcel01: Shield Counter: 0
lunarcel01: Successful diagnostics completion on : N/A
lunarcel01: SAS Address(0): 0x5000cca01ac97e41
lunarcel01: SAS Address(1): 0x0
lunarcel01: Connected Port Number: 0(path0)
lunarcel01: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RKU7DG
lunarcel01: FDE Enable: Disable
lunarcel01: Secured: Unsecured
lunarcel01: Locked: Unlocked
lunarcel01: Needs EKM Attention: No
lunarcel01: Foreign State: None
lunarcel01: Device Speed: 6.0Gb/s
lunarcel01: Link Speed: 6.0Gb/s
lunarcel01: Media Type: Hard Disk Device
lunarcel01: Drive Temperature :26C (78.80 F)
lunarcel01: PI Eligibility: No
lunarcel01: Drive is formatted for PI information: No
lunarcel01: PI: No PI
lunarcel01: Drive's write cache : Disabled
lunarcel01: Port-0 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: 6.0Gb/s
lunarcel01: Port-1 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: Unknown
lunarcel01: Drive has flagged a S.M.A.R.T alert : No
lunarcel01:
lunarcel01:
lunarcel01:
lunarcel01: Virtual Drive: 2 (Target Id: 2)
lunarcel01: Name :
lunarcel01: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel01: Size : 2.727 TB
lunarcel01: Parity Size : 0
lunarcel01: State : Optimal
lunarcel01: Strip Size : 1.0 MB
lunarcel01: Number Of Drives : 1
lunarcel01: Span Depth : 1
lunarcel01: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel01: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel01: Default Access Policy: Read/Write
lunarcel01: Current Access Policy: Read/Write
lunarcel01: Disk Cache Policy : Disabled
lunarcel01: Encryption Type : None
lunarcel01: Is VD Cached: No
lunarcel01: Number of Spans: 1
lunarcel01: Span: 0 - Number of PDs: 1
lunarcel01:
lunarcel01: PD: 0 Information

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lunarcel01: Enclosure Device ID: 20
lunarcel01: Slot Number: 2
lunarcel01: Drive's position: DiskGroup: 2, Span: 0, Arm: 0
lunarcel01: Enclosure position: 0
lunarcel01: Device Id: 17
lunarcel01: WWN: 5000CCA01AC8B7A7
lunarcel01: Sequence Number: 2
lunarcel01: Media Error Count: 0
lunarcel01: Other Error Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Last Predictive Failure Event Seq Number: 0
lunarcel01: PD Type: SAS
lunarcel01: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel01: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel01: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Is Commissioned Spare : NO
lunarcel01: Device Firmware Level: A142
lunarcel01: Shield Counter: 0
lunarcel01: Successful diagnostics completion on : N/A
lunarcel01: SAS Address(0): 0x5000cca01ac8b7a5
lunarcel01: SAS Address(1): 0x0
lunarcel01: Connected Port Number: 0(path0)
lunarcel01: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RKD0BG
lunarcel01: FDE Enable: Disable
lunarcel01: Secured: Unsecured
lunarcel01: Locked: Unlocked
lunarcel01: Needs EKM Attention: No
lunarcel01: Foreign State: None
lunarcel01: Device Speed: 6.0Gb/s
lunarcel01: Link Speed: 6.0Gb/s
lunarcel01: Media Type: Hard Disk Device
lunarcel01: Drive Temperature :26C (78.80 F)
lunarcel01: PI Eligibility: No
lunarcel01: Drive is formatted for PI information: No
lunarcel01: PI: No PI
lunarcel01: Drive's write cache : Disabled
lunarcel01: Port-0 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: 6.0Gb/s
lunarcel01: Port-1 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: Unknown
lunarcel01: Drive has flagged a S.M.A.R.T alert : No
lunarcel01:
lunarcel01:
lunarcel01:
lunarcel01: Virtual Drive: 3 (Target Id: 3)
lunarcel01: Name :
lunarcel01: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel01: Size : 2.727 TB
lunarcel01: Parity Size : 0
lunarcel01: State : Optimal
lunarcel01: Strip Size : 1.0 MB
lunarcel01: Number Of Drives : 1
lunarcel01: Span Depth : 1
lunarcel01: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel01: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel01: Default Access Policy: Read/Write
lunarcel01: Current Access Policy: Read/Write
lunarcel01: Disk Cache Policy : Disabled

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lunarcel01: Encryption Type      : None
lunarcel01: Is VD Cached: No
lunarcel01: Number of Spans: 1
lunarcel01: Span: 0 - Number of PDs: 1
lunarcel01:
lunarcel01: PD: 0 Information
lunarcel01: Enclosure Device ID: 20
lunarcel01: Slot Number: 3
lunarcel01: Drive's position: DiskGroup: 3, Span: 0, Arm: 0
lunarcel01: Enclosure position: 0
lunarcel01: Device Id: 16
lunarcel01: WWN: 500CCA01AC80167
lunarcel01: Sequence Number: 2
lunarcel01: Media Error Count: 0
lunarcel01: Other Error Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Last Predictive Failure Event Seq Number: 0
lunarcel01: PD Type: SAS
lunarcel01: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel01: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel01: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Is Commissioned Spare : NO
lunarcel01: Device Firmware Level: A142
lunarcel01: Shield Counter: 0
lunarcel01: Successful diagnostics completion on : N/A
lunarcel01: SAS Address(0): 0x5000cca01ac80165
lunarcel01: SAS Address(1): 0x0
lunarcel01: Connected Port Number: 0(path0)
lunarcel01: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RJZW3G
lunarcel01: FDE Enable: Disable
lunarcel01: Secured: Unsecured
lunarcel01: Locked: Unlocked
lunarcel01: Needs EKM Attention: No
lunarcel01: Foreign State: None
lunarcel01: Device Speed: 6.0Gb/s
lunarcel01: Link Speed: 6.0Gb/s
lunarcel01: Media Type: Hard Disk Device
lunarcel01: Drive Temperature :26C (78.80 F)
lunarcel01: PI Eligibility: No
lunarcel01: Drive is formatted for PI information: No
lunarcel01: PI: No PI
lunarcel01: Drive's write cache : Disabled
lunarcel01: Port-0 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: 6.0Gb/s
lunarcel01: Port-1 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: Unknown
lunarcel01: Drive has flagged a S.M.A.R.T alert : No
lunarcel01:
lunarcel01:
lunarcel01:
lunarcel01: Virtual Drive: 4 (Target Id: 4)
lunarcel01: Name :
lunarcel01: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel01: Size : 2.727 TB
lunarcel01: Parity Size : 0
lunarcel01: State : Optimal
lunarcel01: Strip Size : 1.0 MB
lunarcel01: Number Of Drives : 1
lunarcel01: Span Depth : 1
lunarcel01: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if

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Bad BBU
lunarcel01: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel01: Default Access Policy: Read/Write
lunarcel01: Current Access Policy: Read/Write
lunarcel01: Disk Cache Policy      : Disabled
lunarcel01: Encryption Type       : None
lunarcel01: Is VD Cached: No
lunarcel01: Number of Spans: 1
lunarcel01: Span: 0 - Number of PDs: 1
lunarcel01:
lunarcel01: PD: 0 Information
lunarcel01: Enclosure Device ID: 20
lunarcel01: Slot Number: 4
lunarcel01: Drive's position: DiskGroup: 4, Span: 0, Arm: 0
lunarcel01: Enclosure position: 0
lunarcel01: Device Id: 15
lunarcel01: WWN: 5000CCA01ABE3CE3
lunarcel01: Sequence Number: 2
lunarcel01: Media Error Count: 0
lunarcel01: Other Error Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Last Predictive Failure Event Seq Number: 0
lunarcel01: PD Type: SAS
lunarcel01: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel01: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel01: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Is Commissioned Spare : NO
lunarcel01: Device Firmware Level: A142
lunarcel01: Shield Counter: 0
lunarcel01: Successful diagnostics completion on : N/A
lunarcel01: SAS Address(0): 0x5000cca01abe3ce1
lunarcel01: SAS Address(1): 0x0
lunarcel01: Connected Port Number: 0(path0)
lunarcel01: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RBMASG
lunarcel01: FDE Enable: Disable
lunarcel01: Secured: Unsecured
lunarcel01: Locked: Unlocked
lunarcel01: Needs EKM Attention: No
lunarcel01: Foreign State: None
lunarcel01: Device Speed: 6.0Gb/s
lunarcel01: Link Speed: 6.0Gb/s
lunarcel01: Media Type: Hard Disk Device
lunarcel01: Drive Temperature :26C (78.80 F)
lunarcel01: PI Eligibility: No
lunarcel01: Drive is formatted for PI information: No
lunarcel01: PI: No PI
lunarcel01: Drive's write cache : Disabled
lunarcel01: Port-0 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: 6.0Gb/s
lunarcel01: Port-1 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: Unknown
lunarcel01: Drive has flagged a S.M.A.R.T alert : No
lunarcel01:
lunarcel01:
lunarcel01:
lunarcel01: Virtual Drive: 5 (Target Id: 5)
lunarcel01: Name :
lunarcel01: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel01: Size : 2.727 TB

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lunarcel01: Parity Size           : 0
lunarcel01: State                 : Optimal
lunarcel01: Strip Size            : 1.0 MB
lunarcel01: Number Of Drives      : 1
lunarcel01: Span Depth            : 1
lunarcel01: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel01: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel01: Default Access Policy: Read/Write
lunarcel01: Current Access Policy: Read/Write
lunarcel01: Disk Cache Policy     : Disabled
lunarcel01: Encryption Type       : None
lunarcel01: Is VD Cached: No
lunarcel01: Number of Spans: 1
lunarcel01: Span: 0 - Number of PDs: 1
lunarcel01:
lunarcel01: PD: 0 Information
lunarcel01: Enclosure Device ID: 20
lunarcel01: Slot Number: 5
lunarcel01: Drive's position: DiskGroup: 5, Span: 0, Arm: 0
lunarcel01: Enclosure position: 0
lunarcel01: Device Id: 14
lunarcel01: WWN: 500CCA01AA13393
lunarcel01: Sequence Number: 2
lunarcel01: Media Error Count: 0
lunarcel01: Other Error Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Last Predictive Failure Event Seq Number: 0
lunarcel01: PD Type: SAS
lunarcel01: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel01: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel01: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Is Commissioned Spare : NO
lunarcel01: Device Firmware Level: A142
lunarcel01: Shield Counter: 0
lunarcel01: Successful diagnostics completion on : N/A
lunarcel01: SAS Address(0): 0x5000cca01aa13391
lunarcel01: SAS Address(1): 0x0
lunarcel01: Connected Port Number: 0(path0)
lunarcel01: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RVN9KD
lunarcel01: FDE Enable: Disable
lunarcel01: Secured: Unsecured
lunarcel01: Locked: Unlocked
lunarcel01: Needs EKM Attention: No
lunarcel01: Foreign State: None
lunarcel01: Device Speed: 6.0Gb/s
lunarcel01: Link Speed: 6.0Gb/s
lunarcel01: Media Type: Hard Disk Device
lunarcel01: Drive Temperature :26C (78.80 F)
lunarcel01: PI Eligibility: No
lunarcel01: Drive is formatted for PI information: No
lunarcel01: PI: No PI
lunarcel01: Drive's write cache : Disabled
lunarcel01: Port-0 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: 6.0Gb/s
lunarcel01: Port-1 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: Unknown
lunarcel01: Drive has flagged a S.M.A.R.T alert : No
lunarcel01:

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lunarcel01:
lunarcel01:
lunarcel01: Virtual Drive: 6 (Target Id: 6)
lunarcel01: Name :
lunarcel01: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel01: Size : 2.727 TB
lunarcel01: Parity Size : 0
lunarcel01: State : Optimal
lunarcel01: Strip Size : 1.0 MB
lunarcel01: Number Of Drives : 1
lunarcel01: Span Depth : 1
lunarcel01: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel01: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel01: Default Access Policy: Read/Write
lunarcel01: Current Access Policy: Read/Write
lunarcel01: Disk Cache Policy : Disabled
lunarcel01: Encryption Type : None
lunarcel01: Is VD Cached: No
lunarcel01: Number of Spans: 1
lunarcel01: Span: 0 - Number of PDs: 1
lunarcel01:
lunarcel01: PD: 0 Information
lunarcel01: Enclosure Device ID: 20
lunarcel01: Slot Number: 6
lunarcel01: Drive's postion: DiskGroup: 6, Span: 0, Arm: 0
lunarcel01: Enclosure position: 0
lunarcel01: Device Id: 13
lunarcel01: WWN: 5000CCA01AA12F0F
lunarcel01: Sequence Number: 2
lunarcel01: Media Error Count: 0
lunarcel01: Other Error Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Last Predictive Failure Event Seq Number: 0
lunarcel01: PD Type: SAS
lunarcel01: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel01: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel01: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Is Commissioned Spare : NO
lunarcel01: Device Firmware Level: A142
lunarcel01: Shield Counter: 0
lunarcel01: Successful diagnostics completion on : N/A
lunarcel01: SAS Address(0): 0x5000cca01aa12f0d
lunarcel01: SAS Address(1): 0x0
lunarcel01: Connected Port Number: 0(path0)
lunarcel01: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RVN07D
lunarcel01: FDE Enable: Disable
lunarcel01: Secured: Unsecured
lunarcel01: Locked: Unlocked
lunarcel01: Needs EKM Attention: No
lunarcel01: Foreign State: None
lunarcel01: Device Speed: 6.0Gb/s
lunarcel01: Link Speed: 6.0Gb/s
lunarcel01: Media Type: Hard Disk Device
lunarcel01: Drive Temperature :25C (77.00 F)
lunarcel01: PI Eligibility: No
lunarcel01: Drive is formatted for PI information: No
lunarcel01: PI: No PI
lunarcel01: Drive's write cache : Disabled
lunarcel01: Port-0 :
lunarcel01: Port status: Active

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lunarcel01: Port's Linkspeed: 6.0Gb/s
lunarcel01: Port-1 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: Unknown
lunarcel01: Drive has flagged a S.M.A.R.T alert : No
lunarcel01:
lunarcel01:
lunarcel01:
lunarcel01: Virtual Drive: 7 (Target Id: 7)
lunarcel01: Name :
lunarcel01: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel01: Size : 2.727 TB
lunarcel01: Parity Size : 0
lunarcel01: State : Optimal
lunarcel01: Strip Size : 1.0 MB
lunarcel01: Number Of Drives : 1
lunarcel01: Span Depth : 1
lunarcel01: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel01: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel01: Default Access Policy: Read/Write
lunarcel01: Current Access Policy: Read/Write
lunarcel01: Disk Cache Policy : Disabled
lunarcel01: Encryption Type : None
lunarcel01: Is VD Cached: No
lunarcel01: Number of Spans: 1
lunarcel01: Span: 0 - Number of PDs: 1
lunarcel01:
lunarcel01: PD: 0 Information
lunarcel01: Enclosure Device ID: 20
lunarcel01: Slot Number: 7
lunarcel01: Drive's position: DiskGroup: 7, Span: 0, Arm: 0
lunarcel01: Enclosure position: 0
lunarcel01: Device Id: 12
lunarcel01: WWN: 500CCA01AA8E02F
lunarcel01: Sequence Number: 2
lunarcel01: Media Error Count: 0
lunarcel01: Other Error Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Last Predictive Failure Event Seq Number: 0
lunarcel01: PD Type: SAS
lunarcel01: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel01: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel01: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Is Commissioned Spare : NO
lunarcel01: Device Firmware Level: A142
lunarcel01: Shield Counter: 0
lunarcel01: Successful diagnostics completion on : N/A
lunarcel01: SAS Address(0): 0x500cca01aa8e02d
lunarcel01: SAS Address(1): 0x0
lunarcel01: Connected Port Number: 0(path0)
lunarcel01: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RZW4JG
lunarcel01: FDE Enable: Disable
lunarcel01: Secured: Unsecured
lunarcel01: Locked: Unlocked
lunarcel01: Needs EKM Attention: No
lunarcel01: Foreign State: None
lunarcel01: Device Speed: 6.0Gb/s
lunarcel01: Link Speed: 6.0Gb/s
lunarcel01: Media Type: Hard Disk Device
lunarcel01: Drive Temperature :25C (77.00 F)

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lunarcel01: PI Eligibility: No
lunarcel01: Drive is formatted for PI information: No
lunarcel01: PI: No PI
lunarcel01: Drive's write cache : Disabled
lunarcel01: Port-0 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: 6.0Gb/s
lunarcel01: Port-1 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: Unknown
lunarcel01: Drive has flagged a S.M.A.R.T alert : No
lunarcel01:
lunarcel01:
lunarcel01:
lunarcel01: Virtual Drive: 8 (Target Id: 8)
lunarcel01: Name :
lunarcel01: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel01: Size : 2.727 TB
lunarcel01: Parity Size : 0
lunarcel01: State : Optimal
lunarcel01: Strip Size : 1.0 MB
lunarcel01: Number Of Drives : 1
lunarcel01: Span Depth : 1
lunarcel01: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel01: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel01: Default Access Policy: Read/Write
lunarcel01: Current Access Policy: Read/Write
lunarcel01: Disk Cache Policy : Disabled
lunarcel01: Encryption Type : None
lunarcel01: Is VD Cached: No
lunarcel01: Number of Spans: 1
lunarcel01: Span: 0 - Number of PDs: 1
lunarcel01:
lunarcel01: PD: 0 Information
lunarcel01: Enclosure Device ID: 20
lunarcel01: Slot Number: 8
lunarcel01: Drive's position: DiskGroup: 8, Span: 0, Arm: 0
lunarcel01: Enclosure position: 0
lunarcel01: Device Id: 11
lunarcel01: WWN: 5000CCA01ABC7D4B
lunarcel01: Sequence Number: 2
lunarcel01: Media Error Count: 0
lunarcel01: Other Error Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Last Predictive Failure Event Seq Number: 0
lunarcel01: PD Type: SAS
lunarcel01: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel01: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel01: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Is Commissioned Spare : NO
lunarcel01: Device Firmware Level: A142
lunarcel01: Shield Counter: 0
lunarcel01: Successful diagnostics completion on : N/A
lunarcel01: SAS Address(0): 0x5000cca01abc7d49
lunarcel01: SAS Address(1): 0x0
lunarcel01: Connected Port Number: 0(path0)
lunarcel01: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RANJPG
lunarcel01: FDE Enable: Disable
lunarcel01: Secured: Unsecured
lunarcel01: Locked: Unlocked

```

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lunarcel01: Needs EKM Attention: No
lunarcel01: Foreign State: None
lunarcel01: Device Speed: 6.0Gb/s
lunarcel01: Link Speed: 6.0Gb/s
lunarcel01: Media Type: Hard Disk Device
lunarcel01: Drive Temperature :25C (77.00 F)
lunarcel01: PI Eligibility: No
lunarcel01: Drive is formatted for PI information: No
lunarcel01: PI: No PI
lunarcel01: Drive's write cache : Disabled
lunarcel01: Port-0 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: 6.0Gb/s
lunarcel01: Port-1 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: Unknown
lunarcel01: Drive has flagged a S.M.A.R.T alert : No
lunarcel01:
lunarcel01:
lunarcel01:
lunarcel01: Virtual Drive: 9 (Target Id: 9)
lunarcel01: Name :
lunarcel01: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel01: Size : 2.727 TB
lunarcel01: Parity Size : 0
lunarcel01: State : Optimal
lunarcel01: Strip Size : 1.0 MB
lunarcel01: Number Of Drives : 1
lunarcel01: Span Depth : 1
lunarcel01: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel01: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel01: Default Access Policy: Read/Write
lunarcel01: Current Access Policy: Read/Write
lunarcel01: Disk Cache Policy : Disabled
lunarcel01: Encryption Type : None
lunarcel01: Is VD Cached: No
lunarcel01: Number of Spans: 1
lunarcel01: Span: 0 - Number of PDs: 1
lunarcel01:
lunarcel01: PD: 0 Information
lunarcel01: Enclosure Device ID: 20
lunarcel01: Slot Number: 9
lunarcel01: Drive's position: DiskGroup: 9, Span: 0, Arm: 0
lunarcel01: Enclosure position: 0
lunarcel01: Device Id: 10
lunarcel01: WWN: 500CCA01ABC7CE3
lunarcel01: Sequence Number: 2
lunarcel01: Media Error Count: 0
lunarcel01: Other Error Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Last Predictive Failure Event Seq Number: 0
lunarcel01: PD Type: SAS
lunarcel01: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel01: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel01: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Is Commissioned Spare : NO
lunarcel01: Device Firmware Level: A142
lunarcel01: Shield Counter: 0
lunarcel01: Successful diagnostics completion on : N/A
lunarcel01: SAS Address(0): 0x5000cca01abc7ce1

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lunarcel01: SAS Address(1): 0x0
lunarcel01: Connected Port Number: 0(path0)
lunarcel01: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RANHVG
lunarcel01: FDE Enable: Disable
lunarcel01: Secured: Unsecured
lunarcel01: Locked: Unlocked
lunarcel01: Needs EKM Attention: No
lunarcel01: Foreign State: None
lunarcel01: Device Speed: 6.0Gb/s
lunarcel01: Link Speed: 6.0Gb/s
lunarcel01: Media Type: Hard Disk Device
lunarcel01: Drive Temperature :25C (77.00 F)
lunarcel01: PI Eligibility: No
lunarcel01: Drive is formatted for PI information: No
lunarcel01: PI: No PI
lunarcel01: Drive's write cache : Disabled
lunarcel01: Port-0 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: 6.0Gb/s
lunarcel01: Port-1 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: Unknown
lunarcel01: Drive has flagged a S.M.A.R.T alert : No
lunarcel01:
lunarcel01:
lunarcel01:
lunarcel01: Virtual Drive: 10 (Target Id: 10)
lunarcel01: Name :
lunarcel01: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel01: Size : 2.727 TB
lunarcel01: Parity Size : 0
lunarcel01: State : Optimal
lunarcel01: Strip Size : 1.0 MB
lunarcel01: Number Of Drives : 1
lunarcel01: Span Depth : 1
lunarcel01: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel01: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel01: Default Access Policy: Read/Write
lunarcel01: Current Access Policy: Read/Write
lunarcel01: Disk Cache Policy : Disabled
lunarcel01: Encryption Type : None
lunarcel01: Is VD Cached: No
lunarcel01: Number of Spans: 1
lunarcel01: Span: 0 - Number of PDs: 1
lunarcel01:
lunarcel01: PD: 0 Information
lunarcel01: Enclosure Device ID: 20
lunarcel01: Slot Number: 10
lunarcel01: Drive's postion: DiskGroup: 10, Span: 0, Arm: 0
lunarcel01: Enclosure position: 0
lunarcel01: Device Id: 9
lunarcel01: WWN: 500CCA01ABC7D47
lunarcel01: Sequence Number: 2
lunarcel01: Media Error Count: 0
lunarcel01: Other Error Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Last Predictive Failure Event Seq Number: 0
lunarcel01: PD Type: SAS
lunarcel01: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel01: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel01: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]

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lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Is Commissioned Spare : NO
lunarcel01: Device Firmware Level: A142
lunarcel01: Shield Counter: 0
lunarcel01: Successful diagnostics completion on : N/A
lunarcel01: SAS Address(0): 0x5000cca01abc7d45
lunarcel01: SAS Address(1): 0x0
lunarcel01: Connected Port Number: 0(path0)
lunarcel01: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RANJNG
lunarcel01: FDE Enable: Disable
lunarcel01: Secured: Unsecured
lunarcel01: Locked: Unlocked
lunarcel01: Needs EKM Attention: No
lunarcel01: Foreign State: None
lunarcel01: Device Speed: 6.0Gb/s
lunarcel01: Link Speed: 6.0Gb/s
lunarcel01: Media Type: Hard Disk Device
lunarcel01: Drive Temperature :25C (77.00 F)
lunarcel01: PI Eligibility: No
lunarcel01: Drive is formatted for PI information: No
lunarcel01: PI: No PI
lunarcel01: Drive's write cache : Disabled
lunarcel01: Port-0 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: 6.0Gb/s
lunarcel01: Port-1 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: Unknown
lunarcel01: Drive has flagged a S.M.A.R.T alert : No
lunarcel01:
lunarcel01:
lunarcel01: Virtual Drive: 11 (Target Id: 11)
lunarcel01: Name :
lunarcel01: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel01: Size : 2.727 TB
lunarcel01: Parity Size : 0
lunarcel01: State : Optimal
lunarcel01: Strip Size : 1.0 MB
lunarcel01: Number Of Drives : 1
lunarcel01: Span Depth : 1
lunarcel01: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel01: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel01: Default Access Policy: Read/Write
lunarcel01: Current Access Policy: Read/Write
lunarcel01: Disk Cache Policy : Disabled
lunarcel01: Encryption Type : None
lunarcel01: Is VD Cached: No
lunarcel01: Number of Spans: 1
lunarcel01: Span: 0 - Number of PDs: 1
lunarcel01:
lunarcel01: PD: 0 Information
lunarcel01: Enclosure Device ID: 20
lunarcel01: Slot Number: 11
lunarcel01: Drive's position: DiskGroup: 11, Span: 0, Arm: 0
lunarcel01: Enclosure position: 0
lunarcel01: Device Id: 8
lunarcel01: WWN: 5000CCA01AA8E037
lunarcel01: Sequence Number: 2
lunarcel01: Media Error Count: 0
lunarcel01: Other Error Count: 0

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lunarcel01: Predictive Failure Count: 0
lunarcel01: Last Predictive Failure Event Seq Number: 0
lunarcel01: PD Type: SAS
lunarcel01: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel01: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel01: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Is Commissioned Spare : NO
lunarcel01: Device Firmware Level: A142
lunarcel01: Shield Counter: 0
lunarcel01: Successful diagnostics completion on : N/A
lunarcel01: SAS Address(0): 0x5000cca01aa8e035
lunarcel01: SAS Address(1): 0x0
lunarcel01: Connected Port Number: 0(path0)
lunarcel01: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RZW4LG
lunarcel01: FDE Enable: Disable
lunarcel01: Secured: Unsecured
lunarcel01: Locked: Unlocked
lunarcel01: Needs EKM Attention: No
lunarcel01: Foreign State: None
lunarcel01: Device Speed: 6.0Gb/s
lunarcel01: Link Speed: 6.0Gb/s
lunarcel01: Media Type: Hard Disk Device
lunarcel01: Drive Temperature :25C (77.00 F)
lunarcel01: PI Eligibility: No
lunarcel01: Drive is formatted for PI information: No
lunarcel01: PI: No PI
lunarcel01: Drive's write cache : Disabled
lunarcel01: Port-0 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: 6.0Gb/s
lunarcel01: Port-1 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: Unknown
lunarcel01: Drive has flagged a S.M.A.R.T alert : No
lunarcel01:
lunarcel01:
lunarcel01:
lunarcel01: Exit Code: 0x00
lunarcel02:
lunarcel02: Adapter #0
lunarcel02:
lunarcel02: Number of Virtual Disks: 12
lunarcel02: Virtual Drive: 0 (Target Id: 0)
lunarcel02: Name :
lunarcel02: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel02: Size : 2.727 TB
lunarcel02: Parity Size : 0
lunarcel02: State : Optimal
lunarcel02: Strip Size : 1.0 MB
lunarcel02: Number Of Drives : 1
lunarcel02: Span Depth : 1
lunarcel02: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Default Access Policy: Read/Write
lunarcel02: Current Access Policy: Read/Write
lunarcel02: Disk Cache Policy : Disabled
lunarcel02: Encryption Type : None
lunarcel02: Is VD Cached: No
lunarcel02: Number of Spans: 1

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lunarcel02: Span: 0 - Number of PDs: 1
lunarcel02:
lunarcel02: PD: 0 Information
lunarcel02: Enclosure Device ID: 20
lunarcel02: Slot Number: 0
lunarcel02: Drive's position: DiskGroup: 0, Span: 0, Arm: 0
lunarcel02: Enclosure position: 0
lunarcel02: Device Id: 19
lunarcel02: WWN: 500CCA01ACC1903
lunarcel02: Sequence Number: 2
lunarcel02: Media Error Count: 0
lunarcel02: Other Error Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Last Predictive Failure Event Seq Number: 0
lunarcel02: PD Type: SAS
lunarcel02: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel02: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel02: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel02: Firmware state: Online, Spun Up
lunarcel02: Is Commissioned Spare : NO
lunarcel02: Device Firmware Level: A142
lunarcel02: Shield Counter: 0
lunarcel02: Successful diagnostics completion on : N/A
lunarcel02: SAS Address(0): 0x5000cca01acc1901
lunarcel02: SAS Address(1): 0x0
lunarcel02: Connected Port Number: 0(path0)
lunarcel02: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RM7MXG
lunarcel02: FDE Enable: Disable
lunarcel02: Secured: Unsecured
lunarcel02: Locked: Unlocked
lunarcel02: Needs EKM Attention: No
lunarcel02: Foreign State: None
lunarcel02: Device Speed: 6.0Gb/s
lunarcel02: Link Speed: 6.0Gb/s
lunarcel02: Media Type: Hard Disk Device
lunarcel02: Drive Temperature :27C (80.60 F)
lunarcel02: PI Eligibility: No
lunarcel02: Drive is formatted for PI information: No
lunarcel02: PI: No PI
lunarcel02: Drive's write cache : Disabled
lunarcel02: Port-0 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: 6.0Gb/s
lunarcel02: Port-1 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: Unknown
lunarcel02: Drive has flagged a S.M.A.R.T alert : No
lunarcel02:
lunarcel02:
lunarcel02:
lunarcel02: Virtual Drive: 1 (Target Id: 1)
lunarcel02: Name :
lunarcel02: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel02: Size : 2.727 TB
lunarcel02: Parity Size : 0
lunarcel02: State : Optimal
lunarcel02: Strip Size : 1.0 MB
lunarcel02: Number Of Drives : 1
lunarcel02: Span Depth : 1
lunarcel02: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU

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lunarcel02: Default Access Policy: Read/Write
lunarcel02: Current Access Policy: Read/Write
lunarcel02: Disk Cache Policy      : Disabled
lunarcel02: Encryption Type       : None
lunarcel02: Is VD Cached: No
lunarcel02: Number of Spans: 1
lunarcel02: Span: 0 - Number of PDs: 1
lunarcel02:
lunarcel02: PD: 0 Information
lunarcel02: Enclosure Device ID: 20
lunarcel02: Slot Number: 1
lunarcel02: Drive's position: DiskGroup: 1, Span: 0, Arm: 0
lunarcel02: Enclosure position: 0
lunarcel02: Device Id: 18
lunarcel02: WWN: 500CCA01ACC52FB
lunarcel02: Sequence Number: 2
lunarcel02: Media Error Count: 0
lunarcel02: Other Error Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Last Predictive Failure Event Seq Number: 0
lunarcel02: PD Type: SAS
lunarcel02: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel02: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel02: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel02: Firmware state: Online, Spun Up
lunarcel02: Is Commissioned Spare : NO
lunarcel02: Device Firmware Level: A142
lunarcel02: Shield Counter: 0
lunarcel02: Successful diagnostics completion on : N/A
lunarcel02: SAS Address(0): 0x5000cca01acc52f9
lunarcel02: SAS Address(1): 0x0
lunarcel02: Connected Port Number: 0(path0)
lunarcel02: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RMBHLD
lunarcel02: FDE Enable: Disable
lunarcel02: Secured: Unsecured
lunarcel02: Locked: Unlocked
lunarcel02: Needs EKM Attention: No
lunarcel02: Foreign State: None
lunarcel02: Device Speed: 6.0Gb/s
lunarcel02: Link Speed: 6.0Gb/s
lunarcel02: Media Type: Hard Disk Device
lunarcel02: Drive Temperature :26C (78.80 F)
lunarcel02: PI Eligibility: No
lunarcel02: Drive is formatted for PI information: No
lunarcel02: PI: No PI
lunarcel02: Drive's write cache : Disabled
lunarcel02: Port-0 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: 6.0Gb/s
lunarcel02: Port-1 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: Unknown
lunarcel02: Drive has flagged a S.M.A.R.T alert : No
lunarcel02:
lunarcel02:
lunarcel02:
lunarcel02: Virtual Drive: 2 (Target Id: 2)
lunarcel02: Name :
lunarcel02: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel02: Size : 2.727 TB
lunarcel02: Parity Size : 0
lunarcel02: State : Optimal
lunarcel02: Strip Size : 1.0 MB

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lunarcel02: Number Of Drives      : 1
lunarcel02: Span Depth            : 1
lunarcel02: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Default Access Policy: Read/Write
lunarcel02: Current Access Policy: Read/Write
lunarcel02: Disk Cache Policy     : Disabled
lunarcel02: Encryption Type       : None
lunarcel02: Is VD Cached: No
lunarcel02: Number of Spans: 1
lunarcel02: Span: 0 - Number of PDs: 1
lunarcel02:
lunarcel02: PD: 0 Information
lunarcel02: Enclosure Device ID: 20
lunarcel02: Slot Number: 2
lunarcel02: Drive's position: DiskGroup: 2, Span: 0, Arm: 0
lunarcel02: Enclosure position: 0
lunarcel02: Device Id: 17
lunarcel02: WWN: 5000CCA01ACAE88B
lunarcel02: Sequence Number: 2
lunarcel02: Media Error Count: 0
lunarcel02: Other Error Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Last Predictive Failure Event Seq Number: 0
lunarcel02: PD Type: SAS
lunarcel02: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel02: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel02: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel02: Firmware state: Online, Spun Up
lunarcel02: Is Commissioned Spare : NO
lunarcel02: Device Firmware Level: A142
lunarcel02: Shield Counter: 0
lunarcel02: Successful diagnostics completion on : N/A
lunarcel02: SAS Address(0): 0x5000cca01acae889
lunarcel02: SAS Address(1): 0x0
lunarcel02: Connected Port Number: 0(path0)
lunarcel02: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RLLBAG
lunarcel02: FDE Enable: Disable
lunarcel02: Secured: Unsecured
lunarcel02: Locked: Unlocked
lunarcel02: Needs EKM Attention: No
lunarcel02: Foreign State: None
lunarcel02: Device Speed: 6.0Gb/s
lunarcel02: Link Speed: 6.0Gb/s
lunarcel02: Media Type: Hard Disk Device
lunarcel02: Drive Temperature :26C (78.80 F)
lunarcel02: PI Eligibility: No
lunarcel02: Drive is formatted for PI information: No
lunarcel02: PI: No PI
lunarcel02: Drive's write cache : Disabled
lunarcel02: Port-0 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: 6.0Gb/s
lunarcel02: Port-1 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: Unknown
lunarcel02: Drive has flagged a S.M.A.R.T alert : No
lunarcel02:
lunarcel02:
lunarcel02:
lunarcel02: Virtual Drive: 3 (Target Id: 3)

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lunarcel02: Name :
lunarcel02: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel02: Size : 2.727 TB
lunarcel02: Parity Size : 0
lunarcel02: State : Optimal
lunarcel02: Strip Size : 1.0 MB
lunarcel02: Number Of Drives : 1
lunarcel02: Span Depth : 1
lunarcel02: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Default Access Policy: Read/Write
lunarcel02: Current Access Policy: Read/Write
lunarcel02: Disk Cache Policy : Disabled
lunarcel02: Encryption Type : None
lunarcel02: Is VD Cached: No
lunarcel02: Number of Spans: 1
lunarcel02: Span: 0 - Number of PDs: 1
lunarcel02:
lunarcel02: PD: 0 Information
lunarcel02: Enclosure Device ID: 20
lunarcel02: Slot Number: 3
lunarcel02: Drive's position: DiskGroup: 3, Span: 0, Arm: 0
lunarcel02: Enclosure position: 0
lunarcel02: Device Id: 16
lunarcel02: WWN: 5000CCA01ACAE8F3
lunarcel02: Sequence Number: 2
lunarcel02: Media Error Count: 0
lunarcel02: Other Error Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Last Predictive Failure Event Seq Number: 0
lunarcel02: PD Type: SAS
lunarcel02: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel02: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel02: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel02: Firmware state: Online, Spun Up
lunarcel02: Is Commissioned Spare : NO
lunarcel02: Device Firmware Level: A142
lunarcel02: Shield Counter: 0
lunarcel02: Successful diagnostics completion on : N/A
lunarcel02: SAS Address(0): 0x5000cca01acae8f1
lunarcel02: SAS Address(1): 0x0
lunarcel02: Connected Port Number: 0(path0)
lunarcel02: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RLLD5G
lunarcel02: FDE Enable: Disable
lunarcel02: Secured: Unsecured
lunarcel02: Locked: Unlocked
lunarcel02: Needs EKM Attention: No
lunarcel02: Foreign State: None
lunarcel02: Device Speed: 6.0Gb/s
lunarcel02: Link Speed: 6.0Gb/s
lunarcel02: Media Type: Hard Disk Device
lunarcel02: Drive Temperature :26C (78.80 F)
lunarcel02: PI Eligibility: No
lunarcel02: Drive is formatted for PI information: No
lunarcel02: PI: No PI
lunarcel02: Drive's write cache : Disabled
lunarcel02: Port-0 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: 6.0Gb/s
lunarcel02: Port-1 :
lunarcel02: Port status: Active

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lunarcel02: Port's Linkspeed: Unknown
lunarcel02: Drive has flagged a S.M.A.R.T alert : No
lunarcel02:
lunarcel02:
lunarcel02: Virtual Drive: 4 (Target Id: 4)
lunarcel02: Name :
lunarcel02: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel02: Size : 2.727 TB
lunarcel02: Parity Size : 0
lunarcel02: State : Optimal
lunarcel02: Strip Size : 1.0 MB
lunarcel02: Number Of Drives : 1
lunarcel02: Span Depth : 1
lunarcel02: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Default Access Policy: Read/Write
lunarcel02: Current Access Policy: Read/Write
lunarcel02: Disk Cache Policy : Disabled
lunarcel02: Encryption Type : None
lunarcel02: Is VD Cached: No
lunarcel02: Number of Spans: 1
lunarcel02: Span: 0 - Number of PDs: 1
lunarcel02:
lunarcel02: PD: 0 Information
lunarcel02: Enclosure Device ID: 20
lunarcel02: Slot Number: 4
lunarcel02: Drive's postion: DiskGroup: 4, Span: 0, Arm: 0
lunarcel02: Enclosure position: 0
lunarcel02: Device Id: 15
lunarcel02: WWN: 500CCA01ACAE30F
lunarcel02: Sequence Number: 2
lunarcel02: Media Error Count: 0
lunarcel02: Other Error Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Last Predictive Failure Event Seq Number: 0
lunarcel02: PD Type: SAS
lunarcel02: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel02: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel02: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel02: Firmware state: Online, Spun Up
lunarcel02: Is Commissioned Spare : NO
lunarcel02: Device Firmware Level: A142
lunarcel02: Shield Counter: 0
lunarcel02: Successful diagnostics completion on : N/A
lunarcel02: SAS Address(0): 0x500cca01acae30d
lunarcel02: SAS Address(1): 0x0
lunarcel02: Connected Port Number: 0(path0)
lunarcel02: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RLL00G
lunarcel02: FDE Enable: Disable
lunarcel02: Secured: Unsecured
lunarcel02: Locked: Unlocked
lunarcel02: Needs EKM Attention: No
lunarcel02: Foreign State: None
lunarcel02: Device Speed: 6.0Gb/s
lunarcel02: Link Speed: 6.0Gb/s
lunarcel02: Media Type: Hard Disk Device
lunarcel02: Drive Temperature :26C (78.80 F)
lunarcel02: PI Eligibility: No
lunarcel02: Drive is formatted for PI information: No
lunarcel02: PI: No PI

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lunarcel02: Drive's write cache : Disabled
lunarcel02: Port-0 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: 6.0Gb/s
lunarcel02: Port-1 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: Unknown
lunarcel02: Drive has flagged a S.M.A.R.T alert : No
lunarcel02:
lunarcel02:
lunarcel02:
lunarcel02: Virtual Drive: 5 (Target Id: 5)
lunarcel02: Name :
lunarcel02: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel02: Size : 2.727 TB
lunarcel02: Parity Size : 0
lunarcel02: State : Optimal
lunarcel02: Strip Size : 1.0 MB
lunarcel02: Number Of Drives : 1
lunarcel02: Span Depth : 1
lunarcel02: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Default Access Policy: Read/Write
lunarcel02: Current Access Policy: Read/Write
lunarcel02: Disk Cache Policy : Disabled
lunarcel02: Encryption Type : None
lunarcel02: Is VD Cached: No
lunarcel02: Number of Spans: 1
lunarcel02: Span: 0 - Number of PDs: 1
lunarcel02:
lunarcel02: PD: 0 Information
lunarcel02: Enclosure Device ID: 20
lunarcel02: Slot Number: 5
lunarcel02: Drive's position: DiskGroup: 5, Span: 0, Arm: 0
lunarcel02: Enclosure position: 0
lunarcel02: Device Id: 14
lunarcel02: WWN: 5000CCA01ACAE83F
lunarcel02: Sequence Number: 2
lunarcel02: Media Error Count: 0
lunarcel02: Other Error Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Last Predictive Failure Event Seq Number: 0
lunarcel02: PD Type: SAS
lunarcel02: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel02: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel02: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel02: Firmware state: Online, Spun Up
lunarcel02: Is Commissioned Spare : NO
lunarcel02: Device Firmware Level: A142
lunarcel02: Shield Counter: 0
lunarcel02: Successful diagnostics completion on : N/A
lunarcel02: SAS Address(0): 0x5000cca01acae83d
lunarcel02: SAS Address(1): 0x0
lunarcel02: Connected Port Number: 0(path0)
lunarcel02: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RLLARG
lunarcel02: FDE Enable: Disable
lunarcel02: Secured: Unsecured
lunarcel02: Locked: Unlocked
lunarcel02: Needs EKM Attention: No
lunarcel02: Foreign State: None
lunarcel02: Device Speed: 6.0Gb/s

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lunarcel02: Link Speed: 6.0Gb/s
lunarcel02: Media Type: Hard Disk Device
lunarcel02: Drive Temperature :26C (78.80 F)
lunarcel02: PI Eligibility: No
lunarcel02: Drive is formatted for PI information: No
lunarcel02: PI: No PI
lunarcel02: Drive's write cache : Disabled
lunarcel02: Port-0 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: 6.0Gb/s
lunarcel02: Port-1 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: Unknown
lunarcel02: Drive has flagged a S.M.A.R.T alert : No
lunarcel02:
lunarcel02:
lunarcel02:
lunarcel02: Virtual Drive: 6 (Target Id: 6)
lunarcel02: Name :
lunarcel02: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel02: Size : 2.727 TB
lunarcel02: Parity Size : 0
lunarcel02: State : Optimal
lunarcel02: Strip Size : 1.0 MB
lunarcel02: Number Of Drives : 1
lunarcel02: Span Depth : 1
lunarcel02: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Default Access Policy: Read/Write
lunarcel02: Current Access Policy: Read/Write
lunarcel02: Disk Cache Policy : Disabled
lunarcel02: Encryption Type : None
lunarcel02: Is VD Cached: No
lunarcel02: Number of Spans: 1
lunarcel02: Span: 0 - Number of PDs: 1
lunarcel02:
lunarcel02: PD: 0 Information
lunarcel02: Enclosure Device ID: 20
lunarcel02: Slot Number: 6
lunarcel02: Drive's postion: DiskGroup: 6, Span: 0, Arm: 0
lunarcel02: Enclosure position: 0
lunarcel02: Device Id: 13
lunarcel02: WWN: 5000CCA01ACC0F6F
lunarcel02: Sequence Number: 2
lunarcel02: Media Error Count: 0
lunarcel02: Other Error Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Last Predictive Failure Event Seq Number: 0
lunarcel02: PD Type: SAS
lunarcel02: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel02: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel02: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel02: Firmware state: Online, Spun Up
lunarcel02: Is Commissioned Spare : NO
lunarcel02: Device Firmware Level: A142
lunarcel02: Shield Counter: 0
lunarcel02: Successful diagnostics completion on : N/A
lunarcel02: SAS Address(0): 0x5000cca01acc0f6d
lunarcel02: SAS Address(1): 0x0
lunarcel02: Connected Port Number: 0(path0)
lunarcel02: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RM704G

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lunarcel02: FDE Enable: Disable
lunarcel02: Secured: Unsecured
lunarcel02: Locked: Unlocked
lunarcel02: Needs EKM Attention: No
lunarcel02: Foreign State: None
lunarcel02: Device Speed: 6.0Gb/s
lunarcel02: Link Speed: 6.0Gb/s
lunarcel02: Media Type: Hard Disk Device
lunarcel02: Drive Temperature :26C (78.80 F)
lunarcel02: PI Eligibility: No
lunarcel02: Drive is formatted for PI information: No
lunarcel02: PI: No PI
lunarcel02: Drive's write cache : Disabled
lunarcel02: Port-0 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: 6.0Gb/s
lunarcel02: Port-1 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: Unknown
lunarcel02: Drive has flagged a S.M.A.R.T alert : No
lunarcel02:
lunarcel02:
lunarcel02:
lunarcel02: Virtual Drive: 7 (Target Id: 7)
lunarcel02: Name :
lunarcel02: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel02: Size : 2.727 TB
lunarcel02: Parity Size : 0
lunarcel02: State : Optimal
lunarcel02: Strip Size : 1.0 MB
lunarcel02: Number Of Drives : 1
lunarcel02: Span Depth : 1
lunarcel02: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Default Access Policy: Read/Write
lunarcel02: Current Access Policy: Read/Write
lunarcel02: Disk Cache Policy : Disabled
lunarcel02: Encryption Type : None
lunarcel02: Is VD Cached: No
lunarcel02: Number of Spans: 1
lunarcel02: Span: 0 - Number of PDs: 1
lunarcel02:
lunarcel02: PD: 0 Information
lunarcel02: Enclosure Device ID: 20
lunarcel02: Slot Number: 7
lunarcel02: Drive's position: DiskGroup: 7, Span: 0, Arm: 0
lunarcel02: Enclosure position: 0
lunarcel02: Device Id: 12
lunarcel02: WWN: 5000CCA01ACA5493
lunarcel02: Sequence Number: 2
lunarcel02: Media Error Count: 0
lunarcel02: Other Error Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Last Predictive Failure Event Seq Number: 0
lunarcel02: PD Type: SAS
lunarcel02: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel02: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel02: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel02: Firmware state: Online, Spun Up
lunarcel02: Is Commissioned Spare : NO
lunarcel02: Device Firmware Level: A142

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lunarcel02: Shield Counter: 0
lunarcel02: Successful diagnostics completion on : N/A
lunarcel02: SAS Address(0): 0x5000cca01aca5491
lunarcel02: SAS Address(1): 0x0
lunarcel02: Connected Port Number: 0(path0)
lunarcel02: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RL8HVG
lunarcel02: FDE Enable: Disable
lunarcel02: Secured: Unsecured
lunarcel02: Locked: Unlocked
lunarcel02: Needs EKM Attention: No
lunarcel02: Foreign State: None
lunarcel02: Device Speed: 6.0Gb/s
lunarcel02: Link Speed: 6.0Gb/s
lunarcel02: Media Type: Hard Disk Device
lunarcel02: Drive Temperature :26C (78.80 F)
lunarcel02: PI Eligibility: No
lunarcel02: Drive is formatted for PI information: No
lunarcel02: PI: No PI
lunarcel02: Drive's write cache : Disabled
lunarcel02: Port-0 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: 6.0Gb/s
lunarcel02: Port-1 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: Unknown
lunarcel02: Drive has flagged a S.M.A.R.T alert : No
lunarcel02:
lunarcel02:
lunarcel02:
lunarcel02: Virtual Drive: 8 (Target Id: 8)
lunarcel02: Name :
lunarcel02: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel02: Size : 2.727 TB
lunarcel02: Parity Size : 0
lunarcel02: State : Optimal
lunarcel02: Strip Size : 1.0 MB
lunarcel02: Number Of Drives : 1
lunarcel02: Span Depth : 1
lunarcel02: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Default Access Policy: Read/Write
lunarcel02: Current Access Policy: Read/Write
lunarcel02: Disk Cache Policy : Disabled
lunarcel02: Encryption Type : None
lunarcel02: Is VD Cached: No
lunarcel02: Number of Spans: 1
lunarcel02: Span: 0 - Number of PDs: 1
lunarcel02:
lunarcel02: PD: 0 Information
lunarcel02: Enclosure Device ID: 20
lunarcel02: Slot Number: 8
lunarcel02: Drive's postion: DiskGroup: 8, Span: 0, Arm: 0
lunarcel02: Enclosure position: 0
lunarcel02: Device Id: 11
lunarcel02: WWN: 500CCA01ACC0D5B
lunarcel02: Sequence Number: 2
lunarcel02: Media Error Count: 0
lunarcel02: Other Error Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Last Predictive Failure Event Seq Number: 0
lunarcel02: PD Type: SAS

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lunarcel02: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel02: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel02: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel02: Firmware state: Online, Spun Up
lunarcel02: Is Commissioned Spare : NO
lunarcel02: Device Firmware Level: A142
lunarcel02: Shield Counter: 0
lunarcel02: Successful diagnostics completion on : N/A
lunarcel02: SAS Address(0): 0x5000cca01acc0d59
lunarcel02: SAS Address(1): 0x0
lunarcel02: Connected Port Number: 0(path0)
lunarcel02: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RM6VVG
lunarcel02: FDE Enable: Disable
lunarcel02: Secured: Unsecured
lunarcel02: Locked: Unlocked
lunarcel02: Needs EKM Attention: No
lunarcel02: Foreign State: None
lunarcel02: Device Speed: 6.0Gb/s
lunarcel02: Link Speed: 6.0Gb/s
lunarcel02: Media Type: Hard Disk Device
lunarcel02: Drive Temperature :25C (77.00 F)
lunarcel02: PI Eligibility: No
lunarcel02: Drive is formatted for PI information: No
lunarcel02: PI: No PI
lunarcel02: Drive's write cache : Disabled
lunarcel02: Port-0 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: 6.0Gb/s
lunarcel02: Port-1 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: Unknown
lunarcel02: Drive has flagged a S.M.A.R.T alert : No
lunarcel02:
lunarcel02:
lunarcel02:
lunarcel02: Virtual Drive: 9 (Target Id: 9)
lunarcel02: Name :
lunarcel02: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel02: Size : 2.727 TB
lunarcel02: Parity Size : 0
lunarcel02: State : Optimal
lunarcel02: Strip Size : 1.0 MB
lunarcel02: Number Of Drives : 1
lunarcel02: Span Depth : 1
lunarcel02: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Default Access Policy: Read/Write
lunarcel02: Current Access Policy: Read/Write
lunarcel02: Disk Cache Policy : Disabled
lunarcel02: Encryption Type : None
lunarcel02: Is VD Cached: No
lunarcel02: Number of Spans: 1
lunarcel02: Span: 0 - Number of PDs: 1
lunarcel02:
lunarcel02: PD: 0 Information
lunarcel02: Enclosure Device ID: 20
lunarcel02: Slot Number: 9
lunarcel02: Drive's postion: DiskGroup: 9, Span: 0, Arm: 0
lunarcel02: Enclosure position: 0
lunarcel02: Device Id: 10
lunarcel02: WWN: 5000CCA01ACAE8D7

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lunarcel02: Sequence Number: 2
lunarcel02: Media Error Count: 0
lunarcel02: Other Error Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Last Predictive Failure Event Seq Number: 0
lunarcel02: PD Type: SAS
lunarcel02: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel02: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel02: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel02: Firmware state: Online, Spun Up
lunarcel02: Is Commissioned Spare : NO
lunarcel02: Device Firmware Level: A142
lunarcel02: Shield Counter: 0
lunarcel02: Successful diagnostics completion on : N/A
lunarcel02: SAS Address(0): 0x5000cca01acae8d5
lunarcel02: SAS Address(1): 0x0
lunarcel02: Connected Port Number: 0(path0)
lunarcel02: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RLLBYG
lunarcel02: FDE Enable: Disable
lunarcel02: Secured: Unsecured
lunarcel02: Locked: Unlocked
lunarcel02: Needs EKM Attention: No
lunarcel02: Foreign State: None
lunarcel02: Device Speed: 6.0Gb/s
lunarcel02: Link Speed: 6.0Gb/s
lunarcel02: Media Type: Hard Disk Device
lunarcel02: Drive Temperature :25C (77.00 F)
lunarcel02: PI Eligibility: No
lunarcel02: Drive is formatted for PI information: No
lunarcel02: PI: No PI
lunarcel02: Drive's write cache : Disabled
lunarcel02: Port-0 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: 6.0Gb/s
lunarcel02: Port-1 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: Unknown
lunarcel02: Drive has flagged a S.M.A.R.T alert : No
lunarcel02:
lunarcel02:
lunarcel02:
lunarcel02: Virtual Drive: 10 (Target Id: 10)
lunarcel02: Name :
lunarcel02: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel02: Size : 2.727 TB
lunarcel02: Parity Size : 0
lunarcel02: State : Optimal
lunarcel02: Strip Size : 1.0 MB
lunarcel02: Number Of Drives : 1
lunarcel02: Span Depth : 1
lunarcel02: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Default Access Policy: Read/Write
lunarcel02: Current Access Policy: Read/Write
lunarcel02: Disk Cache Policy : Disabled
lunarcel02: Encryption Type : None
lunarcel02: Is VD Cached: No
lunarcel02: Number of Spans: 1
lunarcel02: Span: 0 - Number of PDs: 1
lunarcel02:
lunarcel02: PD: 0 Information

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lunarcel02: Enclosure Device ID: 20
lunarcel02: Slot Number: 10
lunarcel02: Drive's position: DiskGroup: 10, Span: 0, Arm: 0
lunarcel02: Enclosure position: 0
lunarcel02: Device Id: 9
lunarcel02: WWN: 5000CCA01ACADFBF
lunarcel02: Sequence Number: 2
lunarcel02: Media Error Count: 0
lunarcel02: Other Error Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Last Predictive Failure Event Seq Number: 0
lunarcel02: PD Type: SAS
lunarcel02: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel02: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel02: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel02: Firmware state: Online, Spun Up
lunarcel02: Is Commissioned Spare : NO
lunarcel02: Device Firmware Level: A142
lunarcel02: Shield Counter: 0
lunarcel02: Successful diagnostics completion on : N/A
lunarcel02: SAS Address(0): 0x5000cca01acadfbf
lunarcel02: SAS Address(1): 0x0
lunarcel02: Connected Port Number: 0(path0)
lunarcel02: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RLKT5G
lunarcel02: FDE Enable: Disable
lunarcel02: Secured: Unsecured
lunarcel02: Locked: Unlocked
lunarcel02: Needs EKM Attention: No
lunarcel02: Foreign State: None
lunarcel02: Device Speed: 6.0Gb/s
lunarcel02: Link Speed: 6.0Gb/s
lunarcel02: Media Type: Hard Disk Device
lunarcel02: Drive Temperature :25C (77.00 F)
lunarcel02: PI Eligibility: No
lunarcel02: Drive is formatted for PI information: No
lunarcel02: PI: No PI
lunarcel02: Drive's write cache : Disabled
lunarcel02: Port-0 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: 6.0Gb/s
lunarcel02: Port-1 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: Unknown
lunarcel02: Drive has flagged a S.M.A.R.T alert : No
lunarcel02:
lunarcel02:
lunarcel02:
lunarcel02: Virtual Drive: 11 (Target Id: 11)
lunarcel02: Name :
lunarcel02: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel02: Size : 2.727 TB
lunarcel02: Parity Size : 0
lunarcel02: State : Optimal
lunarcel02: Strip Size : 1.0 MB
lunarcel02: Number Of Drives : 1
lunarcel02: Span Depth : 1
lunarcel02: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Default Access Policy: Read/Write
lunarcel02: Current Access Policy: Read/Write
lunarcel02: Disk Cache Policy : Disabled

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lunarcel02: Encryption Type      : None
lunarcel02: Is VD Cached: No
lunarcel02: Number of Spans: 1
lunarcel02: Span: 0 - Number of PDs: 1
lunarcel02:
lunarcel02: PD: 0 Information
lunarcel02: Enclosure Device ID: 20
lunarcel02: Slot Number: 11
lunarcel02: Drive's postion: DiskGroup: 11, Span: 0, Arm: 0
lunarcel02: Enclosure position: 0
lunarcel02: Device Id: 8
lunarcel02: WWN: 500CCA01ACC0D8F
lunarcel02: Sequence Number: 2
lunarcel02: Media Error Count: 0
lunarcel02: Other Error Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Last Predictive Failure Event Seq Number: 0
lunarcel02: PD Type: SAS
lunarcel02: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel02: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel02: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel02: Firmware state: Online, Spun Up
lunarcel02: Is Commissioned Spare : NO
lunarcel02: Device Firmware Level: A142
lunarcel02: Shield Counter: 0
lunarcel02: Successful diagnostics completion on : N/A
lunarcel02: SAS Address(0): 0x5000cca01acc0d8d
lunarcel02: SAS Address(1): 0x0
lunarcel02: Connected Port Number: 0(path0)
lunarcel02: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RM6W8G
lunarcel02: FDE Enable: Disable
lunarcel02: Secured: Unsecured
lunarcel02: Locked: Unlocked
lunarcel02: Needs EKM Attention: No
lunarcel02: Foreign State: None
lunarcel02: Device Speed: 6.0Gb/s
lunarcel02: Link Speed: 6.0Gb/s
lunarcel02: Media Type: Hard Disk Device
lunarcel02: Drive Temperature :25C (77.00 F)
lunarcel02: PI Eligibility: No
lunarcel02: Drive is formatted for PI information: No
lunarcel02: PI: No PI
lunarcel02: Drive's write cache : Disabled
lunarcel02: Port-0 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: 6.0Gb/s
lunarcel02: Port-1 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: Unknown
lunarcel02: Drive has flagged a S.M.A.R.T alert : No
lunarcel02:
lunarcel02:
lunarcel02:
lunarcel02: Exit Code: 0x00
lunarcel03:
lunarcel03: Adapter #0
lunarcel03:
lunarcel03: Number of Virtual Disks: 12
lunarcel03: Virtual Drive: 0 (Target Id: 0)
lunarcel03: Name :
lunarcel03: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel03: Size : 2.727 TB

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lunarcel03: Parity Size          : 0
lunarcel03: State                : Optimal
lunarcel03: Strip Size           : 1.0 MB
lunarcel03: Number Of Drives     : 1
lunarcel03: Span Depth           : 1
lunarcel03: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Default Access Policy: Read/Write
lunarcel03: Current Access Policy: Read/Write
lunarcel03: Disk Cache Policy    : Disabled
lunarcel03: Encryption Type      : None
lunarcel03: Is VD Cached: No
lunarcel03: Number of Spans: 1
lunarcel03: Span: 0 - Number of PDs: 1
lunarcel03:
lunarcel03: PD: 0 Information
lunarcel03: Enclosure Device ID: 20
lunarcel03: Slot Number: 0
lunarcel03: Drive's position: DiskGroup: 0, Span: 0, Arm: 0
lunarcel03: Enclosure position: 0
lunarcel03: Device Id: 19
lunarcel03: WWN: 500CCA01ABE8643
lunarcel03: Sequence Number: 2
lunarcel03: Media Error Count: 0
lunarcel03: Other Error Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Last Predictive Failure Event Seq Number: 0
lunarcel03: PD Type: SAS
lunarcel03: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel03: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel03: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel03: Firmware state: Online, Spun Up
lunarcel03: Is Commissioned Spare : NO
lunarcel03: Device Firmware Level: A142
lunarcel03: Shield Counter: 0
lunarcel03: Successful diagnostics completion on : N/A
lunarcel03: SAS Address(0): 0x5000cca01abe8641
lunarcel03: SAS Address(1): 0x0
lunarcel03: Connected Port Number: 0(path0)
lunarcel03: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421225RBT77G
lunarcel03: FDE Enable: Disable
lunarcel03: Secured: Unsecured
lunarcel03: Locked: Unlocked
lunarcel03: Needs EKM Attention: No
lunarcel03: Foreign State: None
lunarcel03: Device Speed: 6.0Gb/s
lunarcel03: Link Speed: 6.0Gb/s
lunarcel03: Media Type: Hard Disk Device
lunarcel03: Drive Temperature :26C (78.80 F)
lunarcel03: PI Eligibility: No
lunarcel03: Drive is formatted for PI information: No
lunarcel03: PI: No PI
lunarcel03: Drive's write cache : Disabled
lunarcel03: Port-0 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: 6.0Gb/s
lunarcel03: Port-1 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: Unknown
lunarcel03: Drive has flagged a S.M.A.R.T alert : No
lunarcel03:

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lunarcel03:
lunarcel03:
lunarcel03: Virtual Drive: 1 (Target Id: 1)
lunarcel03: Name :
lunarcel03: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel03: Size : 2.727 TB
lunarcel03: Parity Size : 0
lunarcel03: State : Optimal
lunarcel03: Strip Size : 1.0 MB
lunarcel03: Number Of Drives : 1
lunarcel03: Span Depth : 1
lunarcel03: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Default Access Policy: Read/Write
lunarcel03: Current Access Policy: Read/Write
lunarcel03: Disk Cache Policy : Disabled
lunarcel03: Encryption Type : None
lunarcel03: Is VD Cached: No
lunarcel03: Number of Spans: 1
lunarcel03: Span: 0 - Number of PDs: 1
lunarcel03:
lunarcel03: PD: 0 Information
lunarcel03: Enclosure Device ID: 20
lunarcel03: Slot Number: 1
lunarcel03: Drive's postion: DiskGroup: 1, Span: 0, Arm: 0
lunarcel03: Enclosure position: 0
lunarcel03: Device Id: 18
lunarcel03: WWN: 500CCA01ABF818B
lunarcel03: Sequence Number: 2
lunarcel03: Media Error Count: 0
lunarcel03: Other Error Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Last Predictive Failure Event Seq Number: 0
lunarcel03: PD Type: SAS
lunarcel03: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel03: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel03: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel03: Firmware state: Online, Spun Up
lunarcel03: Is Commissioned Spare : NO
lunarcel03: Device Firmware Level: A142
lunarcel03: Shield Counter: 0
lunarcel03: Successful diagnostics completion on : N/A
lunarcel03: SAS Address(0): 0x5000cca01abf8189
lunarcel03: SAS Address(1): 0x0
lunarcel03: Connected Port Number: 0(path0)
lunarcel03: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421225RD9Z0G
lunarcel03: FDE Enable: Disable
lunarcel03: Secured: Unsecured
lunarcel03: Locked: Unlocked
lunarcel03: Needs EKM Attention: No
lunarcel03: Foreign State: None
lunarcel03: Device Speed: 6.0Gb/s
lunarcel03: Link Speed: 6.0Gb/s
lunarcel03: Media Type: Hard Disk Device
lunarcel03: Drive Temperature :26C (78.80 F)
lunarcel03: PI Eligibility: No
lunarcel03: Drive is formatted for PI information: No
lunarcel03: PI: No PI
lunarcel03: Drive's write cache : Disabled
lunarcel03: Port-0 :
lunarcel03: Port status: Active

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lunarcel03: Port's Linkspeed: 6.0Gb/s
lunarcel03: Port-1 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: Unknown
lunarcel03: Drive has flagged a S.M.A.R.T alert : No
lunarcel03:
lunarcel03:
lunarcel03:
lunarcel03: Virtual Drive: 2 (Target Id: 2)
lunarcel03: Name :
lunarcel03: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel03: Size : 2.727 TB
lunarcel03: Parity Size : 0
lunarcel03: State : Optimal
lunarcel03: Strip Size : 1.0 MB
lunarcel03: Number Of Drives : 1
lunarcel03: Span Depth : 1
lunarcel03: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Default Access Policy: Read/Write
lunarcel03: Current Access Policy: Read/Write
lunarcel03: Disk Cache Policy : Disabled
lunarcel03: Encryption Type : None
lunarcel03: Is VD Cached: No
lunarcel03: Number of Spans: 1
lunarcel03: Span: 0 - Number of PDs: 1
lunarcel03:
lunarcel03: PD: 0 Information
lunarcel03: Enclosure Device ID: 20
lunarcel03: Slot Number: 2
lunarcel03: Drive's position: DiskGroup: 2, Span: 0, Arm: 0
lunarcel03: Enclosure position: 0
lunarcel03: Device Id: 17
lunarcel03: WWN: 500CCA01AC746E7
lunarcel03: Sequence Number: 2
lunarcel03: Media Error Count: 0
lunarcel03: Other Error Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Last Predictive Failure Event Seq Number: 0
lunarcel03: PD Type: SAS
lunarcel03: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel03: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel03: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel03: Firmware state: Online, Spun Up
lunarcel03: Is Commissioned Spare : NO
lunarcel03: Device Firmware Level: A142
lunarcel03: Shield Counter: 0
lunarcel03: Successful diagnostics completion on : N/A
lunarcel03: SAS Address(0): 0x500cca01ac746e5
lunarcel03: SAS Address(1): 0x0
lunarcel03: Connected Port Number: 0(path0)
lunarcel03: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421225RJLG2G
lunarcel03: FDE Enable: Disable
lunarcel03: Secured: Unsecured
lunarcel03: Locked: Unlocked
lunarcel03: Needs EKM Attention: No
lunarcel03: Foreign State: None
lunarcel03: Device Speed: 6.0Gb/s
lunarcel03: Link Speed: 6.0Gb/s
lunarcel03: Media Type: Hard Disk Device
lunarcel03: Drive Temperature :26C (78.80 F)

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lunarcel03: PI Eligibility: No
lunarcel03: Drive is formatted for PI information: No
lunarcel03: PI: No PI
lunarcel03: Drive's write cache : Disabled
lunarcel03: Port-0 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: 6.0Gb/s
lunarcel03: Port-1 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: Unknown
lunarcel03: Drive has flagged a S.M.A.R.T alert : No
lunarcel03:
lunarcel03:
lunarcel03:
lunarcel03: Virtual Drive: 3 (Target Id: 3)
lunarcel03: Name :
lunarcel03: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel03: Size : 2.727 TB
lunarcel03: Parity Size : 0
lunarcel03: State : Optimal
lunarcel03: Strip Size : 1.0 MB
lunarcel03: Number Of Drives : 1
lunarcel03: Span Depth : 1
lunarcel03: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Default Access Policy: Read/Write
lunarcel03: Current Access Policy: Read/Write
lunarcel03: Disk Cache Policy : Disabled
lunarcel03: Encryption Type : None
lunarcel03: Is VD Cached: No
lunarcel03: Number of Spans: 1
lunarcel03: Span: 0 - Number of PDs: 1
lunarcel03:
lunarcel03: PD: 0 Information
lunarcel03: Enclosure Device ID: 20
lunarcel03: Slot Number: 3
lunarcel03: Drive's position: DiskGroup: 3, Span: 0, Arm: 0
lunarcel03: Enclosure position: 0
lunarcel03: Device Id: 16
lunarcel03: WWN: 5000CCA01AC7AFDB
lunarcel03: Sequence Number: 2
lunarcel03: Media Error Count: 0
lunarcel03: Other Error Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Last Predictive Failure Event Seq Number: 0
lunarcel03: PD Type: SAS
lunarcel03: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel03: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel03: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel03: Firmware state: Online, Spun Up
lunarcel03: Is Commissioned Spare : NO
lunarcel03: Device Firmware Level: A142
lunarcel03: Shield Counter: 0
lunarcel03: Successful diagnostics completion on : N/A
lunarcel03: SAS Address(0): 0x500cca01ac7afd9
lunarcel03: SAS Address(1): 0x0
lunarcel03: Connected Port Number: 0(path0)
lunarcel03: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421225RJUESG
lunarcel03: FDE Enable: Disable
lunarcel03: Secured: Unsecured
lunarcel03: Locked: Unlocked

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lunarcel03: Needs EKM Attention: No
lunarcel03: Foreign State: None
lunarcel03: Device Speed: 6.0Gb/s
lunarcel03: Link Speed: 6.0Gb/s
lunarcel03: Media Type: Hard Disk Device
lunarcel03: Drive Temperature :26C (78.80 F)
lunarcel03: PI Eligibility: No
lunarcel03: Drive is formatted for PI information: No
lunarcel03: PI: No PI
lunarcel03: Drive's write cache : Disabled
lunarcel03: Port-0 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: 6.0Gb/s
lunarcel03: Port-1 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: Unknown
lunarcel03: Drive has flagged a S.M.A.R.T alert : No
lunarcel03:
lunarcel03:
lunarcel03:
lunarcel03: Virtual Drive: 4 (Target Id: 4)
lunarcel03: Name :
lunarcel03: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel03: Size : 2.727 TB
lunarcel03: Parity Size : 0
lunarcel03: State : Optimal
lunarcel03: Strip Size : 1.0 MB
lunarcel03: Number Of Drives : 1
lunarcel03: Span Depth : 1
lunarcel03: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Default Access Policy: Read/Write
lunarcel03: Current Access Policy: Read/Write
lunarcel03: Disk Cache Policy : Disabled
lunarcel03: Encryption Type : None
lunarcel03: Is VD Cached: No
lunarcel03: Number of Spans: 1
lunarcel03: Span: 0 - Number of PDs: 1
lunarcel03:
lunarcel03: PD: 0 Information
lunarcel03: Enclosure Device ID: 20
lunarcel03: Slot Number: 4
lunarcel03: Drive's position: DiskGroup: 4, Span: 0, Arm: 0
lunarcel03: Enclosure position: 0
lunarcel03: Device Id: 15
lunarcel03: WWN: 5000CCA01AB80323
lunarcel03: Sequence Number: 2
lunarcel03: Media Error Count: 0
lunarcel03: Other Error Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Last Predictive Failure Event Seq Number: 0
lunarcel03: PD Type: SAS
lunarcel03: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel03: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel03: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel03: Firmware state: Online, Spun Up
lunarcel03: Is Commissioned Spare : NO
lunarcel03: Device Firmware Level: A142
lunarcel03: Shield Counter: 0
lunarcel03: Successful diagnostics completion on : N/A
lunarcel03: SAS Address(0): 0x5000cca01ab80321

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lunarcel03: SAS Address(1): 0x0
lunarcel03: Connected Port Number: 0(path0)
lunarcel03: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421225R866EG
lunarcel03: FDE Enable: Disable
lunarcel03: Secured: Unsecured
lunarcel03: Locked: Unlocked
lunarcel03: Needs EKM Attention: No
lunarcel03: Foreign State: None
lunarcel03: Device Speed: 6.0Gb/s
lunarcel03: Link Speed: 6.0Gb/s
lunarcel03: Media Type: Hard Disk Device
lunarcel03: Drive Temperature :26C (78.80 F)
lunarcel03: PI Eligibility: No
lunarcel03: Drive is formatted for PI information: No
lunarcel03: PI: No PI
lunarcel03: Drive's write cache : Disabled
lunarcel03: Port-0 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: 6.0Gb/s
lunarcel03: Port-1 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: Unknown
lunarcel03: Drive has flagged a S.M.A.R.T alert : No
lunarcel03:
lunarcel03:
lunarcel03:
lunarcel03: Virtual Drive: 5 (Target Id: 5)
lunarcel03: Name :
lunarcel03: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel03: Size : 2.727 TB
lunarcel03: Parity Size : 0
lunarcel03: State : Optimal
lunarcel03: Strip Size : 1.0 MB
lunarcel03: Number Of Drives : 1
lunarcel03: Span Depth : 1
lunarcel03: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Default Access Policy: Read/Write
lunarcel03: Current Access Policy: Read/Write
lunarcel03: Disk Cache Policy : Disabled
lunarcel03: Encryption Type : None
lunarcel03: Is VD Cached: No
lunarcel03: Number of Spans: 1
lunarcel03: Span: 0 - Number of PDs: 1
lunarcel03:
lunarcel03: PD: 0 Information
lunarcel03: Enclosure Device ID: 20
lunarcel03: Slot Number: 5
lunarcel03: Drive's postion: DiskGroup: 5, Span: 0, Arm: 0
lunarcel03: Enclosure position: 0
lunarcel03: Device Id: 14
lunarcel03: WWN: 500CCA01AC75587
lunarcel03: Sequence Number: 2
lunarcel03: Media Error Count: 0
lunarcel03: Other Error Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Last Predictive Failure Event Seq Number: 0
lunarcel03: PD Type: SAS
lunarcel03: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel03: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel03: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]

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lunarcel03: Firmware state: Online, Spun Up
lunarcel03: Is Commissioned Spare : NO
lunarcel03: Device Firmware Level: A142
lunarcel03: Shield Counter: 0
lunarcel03: Successful diagnostics completion on : N/A
lunarcel03: SAS Address(0): 0x5000cca01ac75585
lunarcel03: SAS Address(1): 0x0
lunarcel03: Connected Port Number: 0(path0)
lunarcel03: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421225RJME8G
lunarcel03: FDE Enable: Disable
lunarcel03: Secured: Unsecured
lunarcel03: Locked: Unlocked
lunarcel03: Needs EKM Attention: No
lunarcel03: Foreign State: None
lunarcel03: Device Speed: 6.0Gb/s
lunarcel03: Link Speed: 6.0Gb/s
lunarcel03: Media Type: Hard Disk Device
lunarcel03: Drive Temperature :25C (77.00 F)
lunarcel03: PI Eligibility: No
lunarcel03: Drive is formatted for PI information: No
lunarcel03: PI: No PI
lunarcel03: Drive's write cache : Disabled
lunarcel03: Port-0 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: 6.0Gb/s
lunarcel03: Port-1 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: Unknown
lunarcel03: Drive has flagged a S.M.A.R.T alert : No
lunarcel03:
lunarcel03:
lunarcel03: Virtual Drive: 6 (Target Id: 6)
lunarcel03: Name :
lunarcel03: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel03: Size : 2.727 TB
lunarcel03: Parity Size : 0
lunarcel03: State : Optimal
lunarcel03: Strip Size : 1.0 MB
lunarcel03: Number Of Drives : 1
lunarcel03: Span Depth : 1
lunarcel03: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Default Access Policy: Read/Write
lunarcel03: Current Access Policy: Read/Write
lunarcel03: Disk Cache Policy : Disabled
lunarcel03: Encryption Type : None
lunarcel03: Is VD Cached: No
lunarcel03: Number of Spans: 1
lunarcel03: Span: 0 - Number of PDs: 1
lunarcel03:
lunarcel03: PD: 0 Information
lunarcel03: Enclosure Device ID: 20
lunarcel03: Slot Number: 6
lunarcel03: Drive's position: DiskGroup: 6, Span: 0, Arm: 0
lunarcel03: Enclosure position: 0
lunarcel03: Device Id: 13
lunarcel03: WWN: 5000CCA01AC65EEF
lunarcel03: Sequence Number: 2
lunarcel03: Media Error Count: 0
lunarcel03: Other Error Count: 0

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lunarcel03: Predictive Failure Count: 0
lunarcel03: Last Predictive Failure Event Seq Number: 0
lunarcel03: PD Type: SAS
lunarcel03: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel03: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel03: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel03: Firmware state: Online, Spun Up
lunarcel03: Is Commissioned Spare : NO
lunarcel03: Device Firmware Level: A142
lunarcel03: Shield Counter: 0
lunarcel03: Successful diagnostics completion on : N/A
lunarcel03: SAS Address(0): 0x5000cca01ac65eed
lunarcel03: SAS Address(1): 0x0
lunarcel03: Connected Port Number: 0(path0)
lunarcel03: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421225RJ305G
lunarcel03: FDE Enable: Disable
lunarcel03: Secured: Unsecured
lunarcel03: Locked: Unlocked
lunarcel03: Needs EKM Attention: No
lunarcel03: Foreign State: None
lunarcel03: Device Speed: 6.0Gb/s
lunarcel03: Link Speed: 6.0Gb/s
lunarcel03: Media Type: Hard Disk Device
lunarcel03: Drive Temperature :25C (77.00 F)
lunarcel03: PI Eligibility: No
lunarcel03: Drive is formatted for PI information: No
lunarcel03: PI: No PI
lunarcel03: Drive's write cache : Disabled
lunarcel03: Port-0 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: 6.0Gb/s
lunarcel03: Port-1 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: Unknown
lunarcel03: Drive has flagged a S.M.A.R.T alert : No
lunarcel03:
lunarcel03:
lunarcel03:
lunarcel03: Virtual Drive: 7 (Target Id: 7)
lunarcel03: Name :
lunarcel03: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel03: Size : 2.727 TB
lunarcel03: Parity Size : 0
lunarcel03: State : Optimal
lunarcel03: Strip Size : 1.0 MB
lunarcel03: Number Of Drives : 1
lunarcel03: Span Depth : 1
lunarcel03: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Default Access Policy: Read/Write
lunarcel03: Current Access Policy: Read/Write
lunarcel03: Disk Cache Policy : Disabled
lunarcel03: Encryption Type : None
lunarcel03: Is VD Cached: No
lunarcel03: Number of Spans: 1
lunarcel03: Span: 0 - Number of PDs: 1
lunarcel03:
lunarcel03: PD: 0 Information
lunarcel03: Enclosure Device ID: 20
lunarcel03: Slot Number: 7
lunarcel03: Drive's position: DiskGroup: 7, Span: 0, Arm: 0

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lunarcel03: Enclosure position: 0
lunarcel03: Device Id: 12
lunarcel03: WWN: 5000CCA01AC4541F
lunarcel03: Sequence Number: 2
lunarcel03: Media Error Count: 0
lunarcel03: Other Error Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Last Predictive Failure Event Seq Number: 0
lunarcel03: PD Type: SAS
lunarcel03: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel03: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel03: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel03: Firmware state: Online, Spun Up
lunarcel03: Is Commissioned Spare : NO
lunarcel03: Device Firmware Level: A142
lunarcel03: Shield Counter: 0
lunarcel03: Successful diagnostics completion on : N/A
lunarcel03: SAS Address(0): 0x5000cca01ac4541d
lunarcel03: SAS Address(1): 0x0
lunarcel03: Connected Port Number: 0(path0)
lunarcel03: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421225RGZ5UG
lunarcel03: FDE Enable: Disable
lunarcel03: Secured: Unsecured
lunarcel03: Locked: Unlocked
lunarcel03: Needs EKM Attention: No
lunarcel03: Foreign State: None
lunarcel03: Device Speed: 6.0Gb/s
lunarcel03: Link Speed: 6.0Gb/s
lunarcel03: Media Type: Hard Disk Device
lunarcel03: Drive Temperature :25C (77.00 F)
lunarcel03: PI Eligibility: No
lunarcel03: Drive is formatted for PI information: No
lunarcel03: PI: No PI
lunarcel03: Drive's write cache : Disabled
lunarcel03: Port-0 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: 6.0Gb/s
lunarcel03: Port-1 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: Unknown
lunarcel03: Drive has flagged a S.M.A.R.T alert : No
lunarcel03:
lunarcel03:
lunarcel03:
lunarcel03: Virtual Drive: 8 (Target Id: 8)
lunarcel03: Name :
lunarcel03: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel03: Size : 2.727 TB
lunarcel03: Parity Size : 0
lunarcel03: State : Optimal
lunarcel03: Strip Size : 1.0 MB
lunarcel03: Number Of Drives : 1
lunarcel03: Span Depth : 1
lunarcel03: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Default Access Policy: Read/Write
lunarcel03: Current Access Policy: Read/Write
lunarcel03: Disk Cache Policy : Disabled
lunarcel03: Encryption Type : None
lunarcel03: Is VD Cached: No
lunarcel03: Number of Spans: 1

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lunarcel03: Span: 0 - Number of PDs: 1
lunarcel03:
lunarcel03: PD: 0 Information
lunarcel03: Enclosure Device ID: 20
lunarcel03: Slot Number: 8
lunarcel03: Drive's position: DiskGroup: 8, Span: 0, Arm: 0
lunarcel03: Enclosure position: 0
lunarcel03: Device Id: 11
lunarcel03: WWN: 500CCA01AC69FD3
lunarcel03: Sequence Number: 2
lunarcel03: Media Error Count: 0
lunarcel03: Other Error Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Last Predictive Failure Event Seq Number: 0
lunarcel03: PD Type: SAS
lunarcel03: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel03: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel03: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel03: Firmware state: Online, Spun Up
lunarcel03: Is Commissioned Spare : NO
lunarcel03: Device Firmware Level: A142
lunarcel03: Shield Counter: 0
lunarcel03: Successful diagnostics completion on : N/A
lunarcel03: SAS Address(0): 0x5000cca01ac69fd1
lunarcel03: SAS Address(1): 0x0
lunarcel03: Connected Port Number: 0(path0)
lunarcel03: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421225RJ7A4G
lunarcel03: FDE Enable: Disable
lunarcel03: Secured: Unsecured
lunarcel03: Locked: Unlocked
lunarcel03: Needs EKM Attention: No
lunarcel03: Foreign State: None
lunarcel03: Device Speed: 6.0Gb/s
lunarcel03: Link Speed: 6.0Gb/s
lunarcel03: Media Type: Hard Disk Device
lunarcel03: Drive Temperature :24C (75.20 F)
lunarcel03: PI Eligibility: No
lunarcel03: Drive is formatted for PI information: No
lunarcel03: PI: No PI
lunarcel03: Drive's write cache : Disabled
lunarcel03: Port-0 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: 6.0Gb/s
lunarcel03: Port-1 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: Unknown
lunarcel03: Drive has flagged a S.M.A.R.T alert : No
lunarcel03:
lunarcel03:
lunarcel03:
lunarcel03: Virtual Drive: 9 (Target Id: 9)
lunarcel03: Name :
lunarcel03: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel03: Size : 2.727 TB
lunarcel03: Parity Size : 0
lunarcel03: State : Optimal
lunarcel03: Strip Size : 1.0 MB
lunarcel03: Number Of Drives : 1
lunarcel03: Span Depth : 1
lunarcel03: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU

```

```

lunarcel03: Default Access Policy: Read/Write
lunarcel03: Current Access Policy: Read/Write
lunarcel03: Disk Cache Policy      : Disabled
lunarcel03: Encryption Type       : None
lunarcel03: Is VD Cached: No
lunarcel03: Number of Spans: 1
lunarcel03: Span: 0 - Number of PDs: 1
lunarcel03:
lunarcel03: PD: 0 Information
lunarcel03: Enclosure Device ID: 20
lunarcel03: Slot Number: 9
lunarcel03: Drive's position: DiskGroup: 9, Span: 0, Arm: 0
lunarcel03: Enclosure position: 0
lunarcel03: Device Id: 10
lunarcel03: WWN: 5000CCA01ABE8697
lunarcel03: Sequence Number: 2
lunarcel03: Media Error Count: 0
lunarcel03: Other Error Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Last Predictive Failure Event Seq Number: 0
lunarcel03: PD Type: SAS
lunarcel03: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel03: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel03: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel03: Firmware state: Online, Spun Up
lunarcel03: Is Commissioned Spare : NO
lunarcel03: Device Firmware Level: A142
lunarcel03: Shield Counter: 0
lunarcel03: Successful diagnostics completion on : N/A
lunarcel03: SAS Address(0): 0x5000cca01abe8695
lunarcel03: SAS Address(1): 0x0
lunarcel03: Connected Port Number: 0(path0)
lunarcel03: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421225RBT7XG
lunarcel03: FDE Enable: Disable
lunarcel03: Secured: Unsecured
lunarcel03: Locked: Unlocked
lunarcel03: Needs EKM Attention: No
lunarcel03: Foreign State: None
lunarcel03: Device Speed: 6.0Gb/s
lunarcel03: Link Speed: 6.0Gb/s
lunarcel03: Media Type: Hard Disk Device
lunarcel03: Drive Temperature :25C (77.00 F)
lunarcel03: PI Eligibility: No
lunarcel03: Drive is formatted for PI information: No
lunarcel03: PI: No PI
lunarcel03: Drive's write cache : Disabled
lunarcel03: Port-0 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: 6.0Gb/s
lunarcel03: Port-1 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: Unknown
lunarcel03: Drive has flagged a S.M.A.R.T alert : No
lunarcel03:
lunarcel03:
lunarcel03:
lunarcel03: Virtual Drive: 10 (Target Id: 10)
lunarcel03: Name      :
lunarcel03: RAID Level      : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel03: Size        : 2.727 TB
lunarcel03: Parity Size    : 0
lunarcel03: State        : Optimal
lunarcel03: Strip Size    : 1.0 MB

```

```

lunarcel03: Number Of Drives      : 1
lunarcel03: Span Depth            : 1
lunarcel03: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Default Access Policy: Read/Write
lunarcel03: Current Access Policy: Read/Write
lunarcel03: Disk Cache Policy     : Disabled
lunarcel03: Encryption Type      : None
lunarcel03: Is VD Cached: No
lunarcel03: Number of Spans: 1
lunarcel03: Span: 0 - Number of PDs: 1
lunarcel03:
lunarcel03: PD: 0 Information
lunarcel03: Enclosure Device ID: 20
lunarcel03: Slot Number: 10
lunarcel03: Drive's position: DiskGroup: 10, Span: 0, Arm: 0
lunarcel03: Enclosure position: 0
lunarcel03: Device Id: 9
lunarcel03: WWN: 5000CCA01AC43F3F
lunarcel03: Sequence Number: 2
lunarcel03: Media Error Count: 0
lunarcel03: Other Error Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Last Predictive Failure Event Seq Number: 0
lunarcel03: PD Type: SAS
lunarcel03: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel03: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel03: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel03: Firmware state: Online, Spun Up
lunarcel03: Is Commissioned Spare : NO
lunarcel03: Device Firmware Level: A142
lunarcel03: Shield Counter: 0
lunarcel03: Successful diagnostics completion on : N/A
lunarcel03: SAS Address(0): 0x5000cca01ac43f3d
lunarcel03: SAS Address(1): 0x0
lunarcel03: Connected Port Number: 0(path0)
lunarcel03: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421225RGXTRG
lunarcel03: FDE Enable: Disable
lunarcel03: Secured: Unsecured
lunarcel03: Locked: Unlocked
lunarcel03: Needs EKM Attention: No
lunarcel03: Foreign State: None
lunarcel03: Device Speed: 6.0Gb/s
lunarcel03: Link Speed: 6.0Gb/s
lunarcel03: Media Type: Hard Disk Device
lunarcel03: Drive Temperature :25C (77.00 F)
lunarcel03: PI Eligibility: No
lunarcel03: Drive is formatted for PI information: No
lunarcel03: PI: No PI
lunarcel03: Drive's write cache : Disabled
lunarcel03: Port-0 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: 6.0Gb/s
lunarcel03: Port-1 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: Unknown
lunarcel03: Drive has flagged a S.M.A.R.T alert : No
lunarcel03:
lunarcel03:
lunarcel03:
lunarcel03: Virtual Drive: 11 (Target Id: 11)

```

```

lunarcel03: Name :
lunarcel03: RAID Level : Primary-0, Secondary-0, RAID Level Qualifier-0
lunarcel03: Size : 2.727 TB
lunarcel03: Parity Size : 0
lunarcel03: State : Optimal
lunarcel03: Strip Size : 1.0 MB
lunarcel03: Number Of Drives : 1
lunarcel03: Span Depth : 1
lunarcel03: Default Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Default Access Policy: Read/Write
lunarcel03: Current Access Policy: Read/Write
lunarcel03: Disk Cache Policy : Disabled
lunarcel03: Encryption Type : None
lunarcel03: Is VD Cached: No
lunarcel03: Number of Spans: 1
lunarcel03: Span: 0 - Number of PDs: 1
lunarcel03:
lunarcel03: PD: 0 Information
lunarcel03: Enclosure Device ID: 20
lunarcel03: Slot Number: 11
lunarcel03: Drive's position: DiskGroup: 11, Span: 0, Arm: 0
lunarcel03: Enclosure position: 0
lunarcel03: Device Id: 8
lunarcel03: WWN: 500CCA01AC43E77
lunarcel03: Sequence Number: 2
lunarcel03: Media Error Count: 0
lunarcel03: Other Error Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Last Predictive Failure Event Seq Number: 0
lunarcel03: PD Type: SAS
lunarcel03: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel03: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel03: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel03: Firmware state: Online, Spun Up
lunarcel03: Is Commissioned Spare : NO
lunarcel03: Device Firmware Level: A142
lunarcel03: Shield Counter: 0
lunarcel03: Successful diagnostics completion on : N/A
lunarcel03: SAS Address(0): 0x5000cca01ac43e75
lunarcel03: SAS Address(1): 0x0
lunarcel03: Connected Port Number: 0(path0)
lunarcel03: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421225RGXS3G
lunarcel03: FDE Enable: Disable
lunarcel03: Secured: Unsecured
lunarcel03: Locked: Unlocked
lunarcel03: Needs EKM Attention: No
lunarcel03: Foreign State: None
lunarcel03: Device Speed: 6.0Gb/s
lunarcel03: Link Speed: 6.0Gb/s
lunarcel03: Media Type: Hard Disk Device
lunarcel03: Drive Temperature :25C (77.00 F)
lunarcel03: PI Eligibility: No
lunarcel03: Drive is formatted for PI information: No
lunarcel03: PI: No PI
lunarcel03: Drive's write cache : Disabled
lunarcel03: Port-0 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: 6.0Gb/s
lunarcel03: Port-1 :
lunarcel03: Port status: Active

```

```

lunarcel03: Port's Linkspeed: Unknown
lunarcel03: Drive has flagged a S.M.A.R.T alert : No
lunarcel03:
lunarcel03:
lunarcel03:
lunarcel03:
lunarcel03: Exit Code: 0x00

```

检查结果： 正常

5.4 本地硬盘检查

```

root@lunardb01 oracle]# dcli -g cell_group -l root /opt/MegaRAID/MegaCli/MegaCli64 -
PDLlist -a0
lunarcel01:
lunarcel01: Adapter #0
lunarcel01:
lunarcel01: Enclosure Device ID: 20
lunarcel01: Slot Number: 0
lunarcel01: Drive's position: DiskGroup: 0, Span: 0, Arm: 0
lunarcel01: Enclosure position: 0
lunarcel01: Device Id: 19
lunarcel01: WWN: 5000CCA01AC662C3
lunarcel01: Sequence Number: 2
lunarcel01: Media Error Count: 0
lunarcel01: Other Error Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Last Predictive Failure Event Seq Number: 0
lunarcel01: PD Type: SAS
lunarcel01: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel01: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel01: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Is Commissioned Spare : NO
lunarcel01: Device Firmware Level: A142
lunarcel01: Shield Counter: 0
lunarcel01: Successful diagnostics completion on : N/A
lunarcel01: SAS Address(0): 0x5000cca01ac662c1
lunarcel01: SAS Address(1): 0x0
lunarcel01: Connected Port Number: 0(path0)
lunarcel01: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RJ382G
lunarcel01: FDE Enable: Disable
lunarcel01: Secured: Unsecured
lunarcel01: Locked: Unlocked
lunarcel01: Needs EKM Attention: No
lunarcel01: Foreign State: None
lunarcel01: Device Speed: 6.0Gb/s
lunarcel01: Link Speed: 6.0Gb/s
lunarcel01: Media Type: Hard Disk Device
lunarcel01: Drive Temperature :27C (80.60 F)
lunarcel01: PI Eligibility: No
lunarcel01: Drive is formatted for PI information: No
lunarcel01: PI: No PI
lunarcel01: Drive's write cache : Disabled
lunarcel01: Port-0 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: 6.0Gb/s
lunarcel01: Port-1 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: Unknown
lunarcel01: Drive has flagged a S.M.A.R.T alert : No

```

```

lunarcel01:
lunarcel01:
lunarcel01:
lunarcel01: Enclosure Device ID: 20
lunarcel01: Slot Number: 1
lunarcel01: Drive's postion: DiskGroup: 1, Span: 0, Arm: 0
lunarcel01: Enclosure position: 0
lunarcel01: Device Id: 18
lunarcel01: WWN: 5000CCA01AC97E43
lunarcel01: Sequence Number: 2
lunarcel01: Media Error Count: 0
lunarcel01: Other Error Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Last Predictive Failure Event Seq Number: 0
lunarcel01: PD Type: SAS
lunarcel01: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel01: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel01: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Is Commissioned Spare : NO
lunarcel01: Device Firmware Level: A142
lunarcel01: Shield Counter: 0
lunarcel01: Successful diagnostics completion on : N/A
lunarcel01: SAS Address(0): 0x5000cca01ac97e41
lunarcel01: SAS Address(1): 0x0
lunarcel01: Connected Port Number: 0(path0)
lunarcel01: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RKU7DG
lunarcel01: FDE Enable: Disable
lunarcel01: Secured: Unsecured
lunarcel01: Locked: Unlocked
lunarcel01: Needs EKM Attention: No
lunarcel01: Foreign State: None
lunarcel01: Device Speed: 6.0Gb/s
lunarcel01: Link Speed: 6.0Gb/s
lunarcel01: Media Type: Hard Disk Device
lunarcel01: Drive Temperature :27C (80.60 F)
lunarcel01: PI Eligibility: No
lunarcel01: Drive is formatted for PI information: No
lunarcel01: PI: No PI
lunarcel01: Drive's write cache : Disabled
lunarcel01: Port-0 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: 6.0Gb/s
lunarcel01: Port-1 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: Unknown
lunarcel01: Drive has flagged a S.M.A.R.T alert : No
lunarcel01:
lunarcel01:
lunarcel01:
lunarcel01: Enclosure Device ID: 20
lunarcel01: Slot Number: 2
lunarcel01: Drive's postion: DiskGroup: 2, Span: 0, Arm: 0
lunarcel01: Enclosure position: 0
lunarcel01: Device Id: 17
lunarcel01: WWN: 5000CCA01AC8B7A7
lunarcel01: Sequence Number: 2
lunarcel01: Media Error Count: 0
lunarcel01: Other Error Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Last Predictive Failure Event Seq Number: 0
lunarcel01: PD Type: SAS
lunarcel01: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]

```

```

lunarcel01: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel01: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Is Commissioned Spare : NO
lunarcel01: Device Firmware Level: A142
lunarcel01: Shield Counter: 0
lunarcel01: Successful diagnostics completion on : N/A
lunarcel01: SAS Address(0): 0x5000cca01ac8b7a5
lunarcel01: SAS Address(1): 0x0
lunarcel01: Connected Port Number: 0(path0)
lunarcel01: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RKD0BG
lunarcel01: FDE Enable: Disable
lunarcel01: Secured: Unsecured
lunarcel01: Locked: Unlocked
lunarcel01: Needs EKM Attention: No
lunarcel01: Foreign State: None
lunarcel01: Device Speed: 6.0Gb/s
lunarcel01: Link Speed: 6.0Gb/s
lunarcel01: Media Type: Hard Disk Device
lunarcel01: Drive Temperature :27C (80.60 F)
lunarcel01: PI Eligibility: No
lunarcel01: Drive is formatted for PI information: No
lunarcel01: PI: No PI
lunarcel01: Drive's write cache : Disabled
lunarcel01: Port-0 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: 6.0Gb/s
lunarcel01: Port-1 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: Unknown
lunarcel01: Drive has flagged a S.M.A.R.T alert : No
lunarcel01:
lunarcel01:
lunarcel01:
lunarcel01: Enclosure Device ID: 20
lunarcel01: Slot Number: 3
lunarcel01: Drive's position: DiskGroup: 3, Span: 0, Arm: 0
lunarcel01: Enclosure position: 0
lunarcel01: Device Id: 16
lunarcel01: WWN: 5000CCA01AC80167
lunarcel01: Sequence Number: 2
lunarcel01: Media Error Count: 0
lunarcel01: Other Error Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Last Predictive Failure Event Seq Number: 0
lunarcel01: PD Type: SAS
lunarcel01: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel01: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel01: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Is Commissioned Spare : NO
lunarcel01: Device Firmware Level: A142
lunarcel01: Shield Counter: 0
lunarcel01: Successful diagnostics completion on : N/A
lunarcel01: SAS Address(0): 0x5000cca01ac80165
lunarcel01: SAS Address(1): 0x0
lunarcel01: Connected Port Number: 0(path0)
lunarcel01: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RJZW3G
lunarcel01: FDE Enable: Disable
lunarcel01: Secured: Unsecured
lunarcel01: Locked: Unlocked
lunarcel01: Needs EKM Attention: No
lunarcel01: Foreign State: None

```

```

lunarcel01: Device Speed: 6.0Gb/s
lunarcel01: Link Speed: 6.0Gb/s
lunarcel01: Media Type: Hard Disk Device
lunarcel01: Drive Temperature :26C (78.80 F)
lunarcel01: PI Eligibility: No
lunarcel01: Drive is formatted for PI information: No
lunarcel01: PI: No PI
lunarcel01: Drive's write cache : Disabled
lunarcel01: Port-0 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: 6.0Gb/s
lunarcel01: Port-1 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: Unknown
lunarcel01: Drive has flagged a S.M.A.R.T alert : No
lunarcel01:
lunarcel01:
lunarcel01:
lunarcel01: Enclosure Device ID: 20
lunarcel01: Slot Number: 4
lunarcel01: Drive's position: DiskGroup: 4, Span: 0, Arm: 0
lunarcel01: Enclosure position: 0
lunarcel01: Device Id: 15
lunarcel01: WWN: 500CCA01ABE3CE3
lunarcel01: Sequence Number: 2
lunarcel01: Media Error Count: 0
lunarcel01: Other Error Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Last Predictive Failure Event Seq Number: 0
lunarcel01: PD Type: SAS
lunarcel01: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel01: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel01: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Is Commissioned Spare : NO
lunarcel01: Device Firmware Level: A142
lunarcel01: Shield Counter: 0
lunarcel01: Successful diagnostics completion on : N/A
lunarcel01: SAS Address(0): 0x500cca01abe3ce1
lunarcel01: SAS Address(1): 0x0
lunarcel01: Connected Port Number: 0(path0)
lunarcel01: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RBMASG
lunarcel01: FDE Enable: Disable
lunarcel01: Secured: Unsecured
lunarcel01: Locked: Unlocked
lunarcel01: Needs EKM Attention: No
lunarcel01: Foreign State: None
lunarcel01: Device Speed: 6.0Gb/s
lunarcel01: Link Speed: 6.0Gb/s
lunarcel01: Media Type: Hard Disk Device
lunarcel01: Drive Temperature :26C (78.80 F)
lunarcel01: PI Eligibility: No
lunarcel01: Drive is formatted for PI information: No
lunarcel01: PI: No PI
lunarcel01: Drive's write cache : Disabled
lunarcel01: Port-0 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: 6.0Gb/s
lunarcel01: Port-1 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: Unknown
lunarcel01: Drive has flagged a S.M.A.R.T alert : No
lunarcel01:

```

```

lunarcel01:
lunarcel01:
lunarcel01: Enclosure Device ID: 20
lunarcel01: Slot Number: 5
lunarcel01: Drive's postion: DiskGroup: 5, Span: 0, Arm: 0
lunarcel01: Enclosure position: 0
lunarcel01: Device Id: 14
lunarcel01: WWN: 5000CCA01AA13393
lunarcel01: Sequence Number: 2
lunarcel01: Media Error Count: 0
lunarcel01: Other Error Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Last Predictive Failure Event Seq Number: 0
lunarcel01: PD Type: SAS
lunarcel01: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel01: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel01: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Is Commissioned Spare : NO
lunarcel01: Device Firmware Level: A142
lunarcel01: Shield Counter: 0
lunarcel01: Successful diagnostics completion on : N/A
lunarcel01: SAS Address(0): 0x5000cca01aa13391
lunarcel01: SAS Address(1): 0x0
lunarcel01: Connected Port Number: 0(path0)
lunarcel01: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RVN9KD
lunarcel01: FDE Enable: Disable
lunarcel01: Secured: Unsecured
lunarcel01: Locked: Unlocked
lunarcel01: Needs EKM Attention: No
lunarcel01: Foreign State: None
lunarcel01: Device Speed: 6.0Gb/s
lunarcel01: Link Speed: 6.0Gb/s
lunarcel01: Media Type: Hard Disk Device
lunarcel01: Drive Temperature :26C (78.80 F)
lunarcel01: PI Eligibility: No
lunarcel01: Drive is formatted for PI information: No
lunarcel01: PI: No PI
lunarcel01: Drive's write cache : Disabled
lunarcel01: Port-0 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: 6.0Gb/s
lunarcel01: Port-1 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: Unknown
lunarcel01: Drive has flagged a S.M.A.R.T alert : No
lunarcel01:
lunarcel01:
lunarcel01:
lunarcel01: Enclosure Device ID: 20
lunarcel01: Slot Number: 6
lunarcel01: Drive's postion: DiskGroup: 6, Span: 0, Arm: 0
lunarcel01: Enclosure position: 0
lunarcel01: Device Id: 13
lunarcel01: WWN: 5000CCA01AA12F0F
lunarcel01: Sequence Number: 2
lunarcel01: Media Error Count: 0
lunarcel01: Other Error Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Last Predictive Failure Event Seq Number: 0
lunarcel01: PD Type: SAS
lunarcel01: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel01: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]

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lunarc01: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarc01: Firmware state: Online, Spun Up
lunarc01: Is Commissioned Spare : NO
lunarc01: Device Firmware Level: A142
lunarc01: Shield Counter: 0
lunarc01: Successful diagnostics completion on : N/A
lunarc01: SAS Address(0): 0x5000cca01aa12f0d
lunarc01: SAS Address(1): 0x0
lunarc01: Connected Port Number: 0(path0)
lunarc01: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RVN07D
lunarc01: FDE Enable: Disable
lunarc01: Secured: Unsecured
lunarc01: Locked: Unlocked
lunarc01: Needs EKM Attention: No
lunarc01: Foreign State: None
lunarc01: Device Speed: 6.0Gb/s
lunarc01: Link Speed: 6.0Gb/s
lunarc01: Media Type: Hard Disk Device
lunarc01: Drive Temperature :26C (78.80 F)
lunarc01: PI Eligibility: No
lunarc01: Drive is formatted for PI information: No
lunarc01: PI: No PI
lunarc01: Drive's write cache : Disabled
lunarc01: Port-0 :
lunarc01: Port status: Active
lunarc01: Port's Linkspeed: 6.0Gb/s
lunarc01: Port-1 :
lunarc01: Port status: Active
lunarc01: Port's Linkspeed: Unknown
lunarc01: Drive has flagged a S.M.A.R.T alert : No
lunarc01:
lunarc01:
lunarc01:
lunarc01: Enclosure Device ID: 20
lunarc01: Slot Number: 7
lunarc01: Drive's position: DiskGroup: 7, Span: 0, Arm: 0
lunarc01: Enclosure position: 0
lunarc01: Device Id: 12
lunarc01: WWN: 5000CCA01AA8E02F
lunarc01: Sequence Number: 2
lunarc01: Media Error Count: 0
lunarc01: Other Error Count: 0
lunarc01: Predictive Failure Count: 0
lunarc01: Last Predictive Failure Event Seq Number: 0
lunarc01: PD Type: SAS
lunarc01: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarc01: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarc01: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarc01: Firmware state: Online, Spun Up
lunarc01: Is Commissioned Spare : NO
lunarc01: Device Firmware Level: A142
lunarc01: Shield Counter: 0
lunarc01: Successful diagnostics completion on : N/A
lunarc01: SAS Address(0): 0x5000cca01aa8e02d
lunarc01: SAS Address(1): 0x0
lunarc01: Connected Port Number: 0(path0)
lunarc01: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RZW4JG
lunarc01: FDE Enable: Disable
lunarc01: Secured: Unsecured
lunarc01: Locked: Unlocked
lunarc01: Needs EKM Attention: No
lunarc01: Foreign State: None
lunarc01: Device Speed: 6.0Gb/s

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lunarcel01: Link Speed: 6.0Gb/s
lunarcel01: Media Type: Hard Disk Device
lunarcel01: Drive Temperature :26C (78.80 F)
lunarcel01: PI Eligibility: No
lunarcel01: Drive is formatted for PI information: No
lunarcel01: PI: No PI
lunarcel01: Drive's write cache : Disabled
lunarcel01: Port-0 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: 6.0Gb/s
lunarcel01: Port-1 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: Unknown
lunarcel01: Drive has flagged a S.M.A.R.T alert : No
lunarcel01:
lunarcel01:
lunarcel01:
lunarcel01: Enclosure Device ID: 20
lunarcel01: Slot Number: 8
lunarcel01: Drive's position: DiskGroup: 8, Span: 0, Arm: 0
lunarcel01: Enclosure position: 0
lunarcel01: Device Id: 11
lunarcel01: WWN: 500CCA01ABC7D4B
lunarcel01: Sequence Number: 2
lunarcel01: Media Error Count: 0
lunarcel01: Other Error Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Last Predictive Failure Event Seq Number: 0
lunarcel01: PD Type: SAS
lunarcel01: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel01: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel01: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Is Commissioned Spare : NO
lunarcel01: Device Firmware Level: A142
lunarcel01: Shield Counter: 0
lunarcel01: Successful diagnostics completion on : N/A
lunarcel01: SAS Address(0): 0x500cca01abc7d49
lunarcel01: SAS Address(1): 0x0
lunarcel01: Connected Port Number: 0(path0)
lunarcel01: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RANJPG
lunarcel01: FDE Enable: Disable
lunarcel01: Secured: Unsecured
lunarcel01: Locked: Unlocked
lunarcel01: Needs EKM Attention: No
lunarcel01: Foreign State: None
lunarcel01: Device Speed: 6.0Gb/s
lunarcel01: Link Speed: 6.0Gb/s
lunarcel01: Media Type: Hard Disk Device
lunarcel01: Drive Temperature :25C (77.00 F)
lunarcel01: PI Eligibility: No
lunarcel01: Drive is formatted for PI information: No
lunarcel01: PI: No PI
lunarcel01: Drive's write cache : Disabled
lunarcel01: Port-0 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: 6.0Gb/s
lunarcel01: Port-1 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: Unknown
lunarcel01: Drive has flagged a S.M.A.R.T alert : No
lunarcel01:
lunarcel01:

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lunarcel01:
lunarcel01: Enclosure Device ID: 20
lunarcel01: Slot Number: 9
lunarcel01: Drive's postion: DiskGroup: 9, Span: 0, Arm: 0
lunarcel01: Enclosure position: 0
lunarcel01: Device Id: 10
lunarcel01: WWN: 5000CCA01ABC7CE3
lunarcel01: Sequence Number: 2
lunarcel01: Media Error Count: 0
lunarcel01: Other Error Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Last Predictive Failure Event Seq Number: 0
lunarcel01: PD Type: SAS
lunarcel01: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel01: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel01: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Is Commissioned Spare : NO
lunarcel01: Device Firmware Level: A142
lunarcel01: Shield Counter: 0
lunarcel01: Successful diagnostics completion on : N/A
lunarcel01: SAS Address(0): 0x5000cca01abc7ce1
lunarcel01: SAS Address(1): 0x0
lunarcel01: Connected Port Number: 0(path0)
lunarcel01: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RANHVG
lunarcel01: FDE Enable: Disable
lunarcel01: Secured: Unsecured
lunarcel01: Locked: Unlocked
lunarcel01: Needs EKM Attention: No
lunarcel01: Foreign State: None
lunarcel01: Device Speed: 6.0Gb/s
lunarcel01: Link Speed: 6.0Gb/s
lunarcel01: Media Type: Hard Disk Device
lunarcel01: Drive Temperature :26C (78.80 F)
lunarcel01: PI Eligibility: No
lunarcel01: Drive is formatted for PI information: No
lunarcel01: PI: No PI
lunarcel01: Drive's write cache : Disabled
lunarcel01: Port-0 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: 6.0Gb/s
lunarcel01: Port-1 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: Unknown
lunarcel01: Drive has flagged a S.M.A.R.T alert : No
lunarcel01:
lunarcel01:
lunarcel01:
lunarcel01: Enclosure Device ID: 20
lunarcel01: Slot Number: 10
lunarcel01: Drive's postion: DiskGroup: 10, Span: 0, Arm: 0
lunarcel01: Enclosure position: 0
lunarcel01: Device Id: 9
lunarcel01: WWN: 5000CCA01ABC7D47
lunarcel01: Sequence Number: 2
lunarcel01: Media Error Count: 0
lunarcel01: Other Error Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Last Predictive Failure Event Seq Number: 0
lunarcel01: PD Type: SAS
lunarcel01: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel01: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel01: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]

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lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Is Commissioned Spare : NO
lunarcel01: Device Firmware Level: A142
lunarcel01: Shield Counter: 0
lunarcel01: Successful diagnostics completion on : N/A
lunarcel01: SAS Address(0): 0x5000cca01abc7d45
lunarcel01: SAS Address(1): 0x0
lunarcel01: Connected Port Number: 0(path0)
lunarcel01: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RANJNG
lunarcel01: FDE Enable: Disable
lunarcel01: Secured: Unsecured
lunarcel01: Locked: Unlocked
lunarcel01: Needs EKM Attention: No
lunarcel01: Foreign State: None
lunarcel01: Device Speed: 6.0Gb/s
lunarcel01: Link Speed: 6.0Gb/s
lunarcel01: Media Type: Hard Disk Device
lunarcel01: Drive Temperature :26C (78.80 F)
lunarcel01: PI Eligibility: No
lunarcel01: Drive is formatted for PI information: No
lunarcel01: PI: No PI
lunarcel01: Drive's write cache : Disabled
lunarcel01: Port-0 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: 6.0Gb/s
lunarcel01: Port-1 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: Unknown
lunarcel01: Drive has flagged a S.M.A.R.T alert : No
lunarcel01:
lunarcel01:
lunarcel01:
lunarcel01: Enclosure Device ID: 20
lunarcel01: Slot Number: 11
lunarcel01: Drive's position: DiskGroup: 11, Span: 0, Arm: 0
lunarcel01: Enclosure position: 0
lunarcel01: Device Id: 8
lunarcel01: WWN: 5000CCA01AA8E037
lunarcel01: Sequence Number: 2
lunarcel01: Media Error Count: 0
lunarcel01: Other Error Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Last Predictive Failure Event Seq Number: 0
lunarcel01: PD Type: SAS
lunarcel01: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel01: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel01: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Is Commissioned Spare : NO
lunarcel01: Device Firmware Level: A142
lunarcel01: Shield Counter: 0
lunarcel01: Successful diagnostics completion on : N/A
lunarcel01: SAS Address(0): 0x5000cca01aa8e035
lunarcel01: SAS Address(1): 0x0
lunarcel01: Connected Port Number: 0(path0)
lunarcel01: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RZW4LG
lunarcel01: FDE Enable: Disable
lunarcel01: Secured: Unsecured
lunarcel01: Locked: Unlocked
lunarcel01: Needs EKM Attention: No
lunarcel01: Foreign State: None
lunarcel01: Device Speed: 6.0Gb/s
lunarcel01: Link Speed: 6.0Gb/s

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lunarcel01: Media Type: Hard Disk Device
lunarcel01: Drive Temperature :25C (77.00 F)
lunarcel01: PI Eligibility: No
lunarcel01: Drive is formatted for PI information: No
lunarcel01: PI: No PI
lunarcel01: Drive's write cache : Disabled
lunarcel01: Port-0 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: 6.0Gb/s
lunarcel01: Port-1 :
lunarcel01: Port status: Active
lunarcel01: Port's Linkspeed: Unknown
lunarcel01: Drive has flagged a S.M.A.R.T alert : No
lunarcel01:
lunarcel01:
lunarcel01:
lunarcel01: Exit Code: 0x00
lunarcel02:
lunarcel02: Adapter #0
lunarcel02:
lunarcel02: Enclosure Device ID: 20
lunarcel02: Slot Number: 0
lunarcel02: Drive's position: DiskGroup: 0, Span: 0, Arm: 0
lunarcel02: Enclosure position: 0
lunarcel02: Device Id: 19
lunarcel02: WWN: 5000CCA01ACC1903
lunarcel02: Sequence Number: 2
lunarcel02: Media Error Count: 0
lunarcel02: Other Error Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Last Predictive Failure Event Seq Number: 0
lunarcel02: PD Type: SAS
lunarcel02: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel02: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel02: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel02: Firmware state: Online, Spun Up
lunarcel02: Is Commissioned Spare : NO
lunarcel02: Device Firmware Level: A142
lunarcel02: Shield Counter: 0
lunarcel02: Successful diagnostics completion on : N/A
lunarcel02: SAS Address(0): 0x5000cca01acc1901
lunarcel02: SAS Address(1): 0x0
lunarcel02: Connected Port Number: 0(path0)
lunarcel02: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RM7MXG
lunarcel02: FDE Enable: Disable
lunarcel02: Secured: Unsecured
lunarcel02: Locked: Unlocked
lunarcel02: Needs EKM Attention: No
lunarcel02: Foreign State: None
lunarcel02: Device Speed: 6.0Gb/s
lunarcel02: Link Speed: 6.0Gb/s
lunarcel02: Media Type: Hard Disk Device
lunarcel02: Drive Temperature :27C (80.60 F)
lunarcel02: PI Eligibility: No
lunarcel02: Drive is formatted for PI information: No
lunarcel02: PI: No PI
lunarcel02: Drive's write cache : Disabled
lunarcel02: Port-0 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: 6.0Gb/s
lunarcel02: Port-1 :
lunarcel02: Port status: Active

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lunarcel02: Port's Linkspeed: Unknown
lunarcel02: Drive has flagged a S.M.A.R.T alert : No
lunarcel02:
lunarcel02:
lunarcel02: Enclosure Device ID: 20
lunarcel02: Slot Number: 1
lunarcel02: Drive's postion: DiskGroup: 1, Span: 0, Arm: 0
lunarcel02: Enclosure position: 0
lunarcel02: Device Id: 18
lunarcel02: WWN: 500CCA01ACC52FB
lunarcel02: Sequence Number: 2
lunarcel02: Media Error Count: 0
lunarcel02: Other Error Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Last Predictive Failure Event Seq Number: 0
lunarcel02: PD Type: SAS
lunarcel02: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel02: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel02: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel02: Firmware state: Online, Spun Up
lunarcel02: Is Commissioned Spare : NO
lunarcel02: Device Firmware Level: A142
lunarcel02: Shield Counter: 0
lunarcel02: Successful diagnostics completion on : N/A
lunarcel02: SAS Address(0): 0x5000cca01acc52f9
lunarcel02: SAS Address(1): 0x0
lunarcel02: Connected Port Number: 0(path0)
lunarcel02: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RMBHLD
lunarcel02: FDE Enable: Disable
lunarcel02: Secured: Unsecured
lunarcel02: Locked: Unlocked
lunarcel02: Needs EKM Attention: No
lunarcel02: Foreign State: None
lunarcel02: Device Speed: 6.0Gb/s
lunarcel02: Link Speed: 6.0Gb/s
lunarcel02: Media Type: Hard Disk Device
lunarcel02: Drive Temperature :27C (80.60 F)
lunarcel02: PI Eligibility: No
lunarcel02: Drive is formatted for PI information: No
lunarcel02: PI: No PI
lunarcel02: Drive's write cache : Disabled
lunarcel02: Port-0 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: 6.0Gb/s
lunarcel02: Port-1 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: Unknown
lunarcel02: Drive has flagged a S.M.A.R.T alert : No
lunarcel02:
lunarcel02:
lunarcel02: Enclosure Device ID: 20
lunarcel02: Slot Number: 2
lunarcel02: Drive's postion: DiskGroup: 2, Span: 0, Arm: 0
lunarcel02: Enclosure position: 0
lunarcel02: Device Id: 17
lunarcel02: WWN: 500CCA01ACAE88B
lunarcel02: Sequence Number: 2
lunarcel02: Media Error Count: 0
lunarcel02: Other Error Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Last Predictive Failure Event Seq Number: 0

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lunarcel02: PD Type: SAS
lunarcel02: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel02: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel02: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel02: Firmware state: Online, Spun Up
lunarcel02: Is Commissioned Spare : NO
lunarcel02: Device Firmware Level: A142
lunarcel02: Shield Counter: 0
lunarcel02: Successful diagnostics completion on : N/A
lunarcel02: SAS Address(0): 0x5000cca01acae889
lunarcel02: SAS Address(1): 0x0
lunarcel02: Connected Port Number: 0(path0)
lunarcel02: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RLLBAG
lunarcel02: FDE Enable: Disable
lunarcel02: Secured: Unsecured
lunarcel02: Locked: Unlocked
lunarcel02: Needs EKM Attention: No
lunarcel02: Foreign State: None
lunarcel02: Device Speed: 6.0Gb/s
lunarcel02: Link Speed: 6.0Gb/s
lunarcel02: Media Type: Hard Disk Device
lunarcel02: Drive Temperature :27C (80.60 F)
lunarcel02: PI Eligibility: No
lunarcel02: Drive is formatted for PI information: No
lunarcel02: PI: No PI
lunarcel02: Drive's write cache : Disabled
lunarcel02: Port-0 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: 6.0Gb/s
lunarcel02: Port-1 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: Unknown
lunarcel02: Drive has flagged a S.M.A.R.T alert : No
lunarcel02:
lunarcel02:
lunarcel02: Enclosure Device ID: 20
lunarcel02: Slot Number: 3
lunarcel02: Drive's postion: DiskGroup: 3, Span: 0, Arm: 0
lunarcel02: Enclosure position: 0
lunarcel02: Device Id: 16
lunarcel02: WWN: 5000CCA01ACAE8F3
lunarcel02: Sequence Number: 2
lunarcel02: Media Error Count: 0
lunarcel02: Other Error Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Last Predictive Failure Event Seq Number: 0
lunarcel02: PD Type: SAS
lunarcel02: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel02: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel02: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel02: Firmware state: Online, Spun Up
lunarcel02: Is Commissioned Spare : NO
lunarcel02: Device Firmware Level: A142
lunarcel02: Shield Counter: 0
lunarcel02: Successful diagnostics completion on : N/A
lunarcel02: SAS Address(0): 0x5000cca01acae8f1
lunarcel02: SAS Address(1): 0x0
lunarcel02: Connected Port Number: 0(path0)
lunarcel02: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RLLD5G
lunarcel02: FDE Enable: Disable
lunarcel02: Secured: Unsecured
lunarcel02: Locked: Unlocked

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lunarcel02: Needs EKM Attention: No
lunarcel02: Foreign State: None
lunarcel02: Device Speed: 6.0Gb/s
lunarcel02: Link Speed: 6.0Gb/s
lunarcel02: Media Type: Hard Disk Device
lunarcel02: Drive Temperature :26C (78.80 F)
lunarcel02: PI Eligibility: No
lunarcel02: Drive is formatted for PI information: No
lunarcel02: PI: No PI
lunarcel02: Drive's write cache : Disabled
lunarcel02: Port-0 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: 6.0Gb/s
lunarcel02: Port-1 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: Unknown
lunarcel02: Drive has flagged a S.M.A.R.T alert : No
lunarcel02:
lunarcel02:
lunarcel02:
lunarcel02: Enclosure Device ID: 20
lunarcel02: Slot Number: 4
lunarcel02: Drive's postion: DiskGroup: 4, Span: 0, Arm: 0
lunarcel02: Enclosure position: 0
lunarcel02: Device Id: 15
lunarcel02: WWN: 500CCA01ACAE30F
lunarcel02: Sequence Number: 2
lunarcel02: Media Error Count: 0
lunarcel02: Other Error Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Last Predictive Failure Event Seq Number: 0
lunarcel02: PD Type: SAS
lunarcel02: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel02: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel02: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel02: Firmware state: Online, Spun Up
lunarcel02: Is Commissioned Spare : NO
lunarcel02: Device Firmware Level: A142
lunarcel02: Shield Counter: 0
lunarcel02: Successful diagnostics completion on : N/A
lunarcel02: SAS Address(0): 0x5000cca01acae30d
lunarcel02: SAS Address(1): 0x0
lunarcel02: Connected Port Number: 0(path0)
lunarcel02: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RLL00G
lunarcel02: FDE Enable: Disable
lunarcel02: Secured: Unsecured
lunarcel02: Locked: Unlocked
lunarcel02: Needs EKM Attention: No
lunarcel02: Foreign State: None
lunarcel02: Device Speed: 6.0Gb/s
lunarcel02: Link Speed: 6.0Gb/s
lunarcel02: Media Type: Hard Disk Device
lunarcel02: Drive Temperature :26C (78.80 F)
lunarcel02: PI Eligibility: No
lunarcel02: Drive is formatted for PI information: No
lunarcel02: PI: No PI
lunarcel02: Drive's write cache : Disabled
lunarcel02: Port-0 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: 6.0Gb/s
lunarcel02: Port-1 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: Unknown

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lunarcel02: Drive has flagged a S.M.A.R.T alert : No
lunarcel02:
lunarcel02:
lunarcel02:
lunarcel02: Enclosure Device ID: 20
lunarcel02: Slot Number: 5
lunarcel02: Drive's postion: DiskGroup: 5, Span: 0, Arm: 0
lunarcel02: Enclosure position: 0
lunarcel02: Device Id: 14
lunarcel02: WWN: 5000CCA01ACAE83F
lunarcel02: Sequence Number: 2
lunarcel02: Media Error Count: 0
lunarcel02: Other Error Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Last Predictive Failure Event Seq Number: 0
lunarcel02: PD Type: SAS
lunarcel02: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel02: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel02: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel02: Firmware state: Online, Spun Up
lunarcel02: Is Commissioned Spare : NO
lunarcel02: Device Firmware Level: A142
lunarcel02: Shield Counter: 0
lunarcel02: Successful diagnostics completion on : N/A
lunarcel02: SAS Address(0): 0x5000cca01acae83d
lunarcel02: SAS Address(1): 0x0
lunarcel02: Connected Port Number: 0(path0)
lunarcel02: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RLLARG
lunarcel02: FDE Enable: Disable
lunarcel02: Secured: Unsecured
lunarcel02: Locked: Unlocked
lunarcel02: Needs EKM Attention: No
lunarcel02: Foreign State: None
lunarcel02: Device Speed: 6.0Gb/s
lunarcel02: Link Speed: 6.0Gb/s
lunarcel02: Media Type: Hard Disk Device
lunarcel02: Drive Temperature :26C (78.80 F)
lunarcel02: PI Eligibility: No
lunarcel02: Drive is formatted for PI information: No
lunarcel02: PI: No PI
lunarcel02: Drive's write cache : Disabled
lunarcel02: Port-0 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: 6.0Gb/s
lunarcel02: Port-1 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: Unknown
lunarcel02: Drive has flagged a S.M.A.R.T alert : No
lunarcel02:
lunarcel02:
lunarcel02:
lunarcel02: Enclosure Device ID: 20
lunarcel02: Slot Number: 6
lunarcel02: Drive's postion: DiskGroup: 6, Span: 0, Arm: 0
lunarcel02: Enclosure position: 0
lunarcel02: Device Id: 13
lunarcel02: WWN: 5000CCA01ACC0F6F
lunarcel02: Sequence Number: 2
lunarcel02: Media Error Count: 0
lunarcel02: Other Error Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Last Predictive Failure Event Seq Number: 0
lunarcel02: PD Type: SAS

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lunarcel02: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel02: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel02: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel02: Firmware state: Online, Spun Up
lunarcel02: Is Commissioned Spare : NO
lunarcel02: Device Firmware Level: A142
lunarcel02: Shield Counter: 0
lunarcel02: Successful diagnostics completion on : N/A
lunarcel02: SAS Address(0): 0x5000cca01acc0f6d
lunarcel02: SAS Address(1): 0x0
lunarcel02: Connected Port Number: 0(path0)
lunarcel02: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RM704G
lunarcel02: FDE Enable: Disable
lunarcel02: Secured: Unsecured
lunarcel02: Locked: Unlocked
lunarcel02: Needs EKM Attention: No
lunarcel02: Foreign State: None
lunarcel02: Device Speed: 6.0Gb/s
lunarcel02: Link Speed: 6.0Gb/s
lunarcel02: Media Type: Hard Disk Device
lunarcel02: Drive Temperature :26C (78.80 F)
lunarcel02: PI Eligibility: No
lunarcel02: Drive is formatted for PI information: No
lunarcel02: PI: No PI
lunarcel02: Drive's write cache : Disabled
lunarcel02: Port-0 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: 6.0Gb/s
lunarcel02: Port-1 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: Unknown
lunarcel02: Drive has flagged a S.M.A.R.T alert : No
lunarcel02:
lunarcel02:
lunarcel02: Enclosure Device ID: 20
lunarcel02: Slot Number: 7
lunarcel02: Drive's position: DiskGroup: 7, Span: 0, Arm: 0
lunarcel02: Enclosure position: 0
lunarcel02: Device Id: 12
lunarcel02: WWN: 5000CCA01ACA5493
lunarcel02: Sequence Number: 2
lunarcel02: Media Error Count: 0
lunarcel02: Other Error Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Last Predictive Failure Event Seq Number: 0
lunarcel02: PD Type: SAS
lunarcel02: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel02: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel02: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel02: Firmware state: Online, Spun Up
lunarcel02: Is Commissioned Spare : NO
lunarcel02: Device Firmware Level: A142
lunarcel02: Shield Counter: 0
lunarcel02: Successful diagnostics completion on : N/A
lunarcel02: SAS Address(0): 0x5000cca01aca5491
lunarcel02: SAS Address(1): 0x0
lunarcel02: Connected Port Number: 0(path0)
lunarcel02: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RL8HVG
lunarcel02: FDE Enable: Disable
lunarcel02: Secured: Unsecured
lunarcel02: Locked: Unlocked
lunarcel02: Needs EKM Attention: No

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lunarcel02: Foreign State: None
lunarcel02: Device Speed: 6.0Gb/s
lunarcel02: Link Speed: 6.0Gb/s
lunarcel02: Media Type: Hard Disk Device
lunarcel02: Drive Temperature :26C (78.80 F)
lunarcel02: PI Eligibility: No
lunarcel02: Drive is formatted for PI information: No
lunarcel02: PI: No PI
lunarcel02: Drive's write cache : Disabled
lunarcel02: Port-0 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: 6.0Gb/s
lunarcel02: Port-1 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: Unknown
lunarcel02: Drive has flagged a S.M.A.R.T alert : No
lunarcel02:
lunarcel02:
lunarcel02:
lunarcel02: Enclosure Device ID: 20
lunarcel02: Slot Number: 8
lunarcel02: Drive's position: DiskGroup: 8, Span: 0, Arm: 0
lunarcel02: Enclosure position: 0
lunarcel02: Device Id: 11
lunarcel02: WWN: 500CCA01ACC0D5B
lunarcel02: Sequence Number: 2
lunarcel02: Media Error Count: 0
lunarcel02: Other Error Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Last Predictive Failure Event Seq Number: 0
lunarcel02: PD Type: SAS
lunarcel02: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel02: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel02: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel02: Firmware state: Online, Spun Up
lunarcel02: Is Commissioned Spare : NO
lunarcel02: Device Firmware Level: A142
lunarcel02: Shield Counter: 0
lunarcel02: Successful diagnostics completion on : N/A
lunarcel02: SAS Address(0): 0x5000cca01acc0d59
lunarcel02: SAS Address(1): 0x0
lunarcel02: Connected Port Number: 0(path0)
lunarcel02: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RM6VVG
lunarcel02: FDE Enable: Disable
lunarcel02: Secured: Unsecured
lunarcel02: Locked: Unlocked
lunarcel02: Needs EKM Attention: No
lunarcel02: Foreign State: None
lunarcel02: Device Speed: 6.0Gb/s
lunarcel02: Link Speed: 6.0Gb/s
lunarcel02: Media Type: Hard Disk Device
lunarcel02: Drive Temperature :26C (78.80 F)
lunarcel02: PI Eligibility: No
lunarcel02: Drive is formatted for PI information: No
lunarcel02: PI: No PI
lunarcel02: Drive's write cache : Disabled
lunarcel02: Port-0 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: 6.0Gb/s
lunarcel02: Port-1 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: Unknown
lunarcel02: Drive has flagged a S.M.A.R.T alert : No

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lunarcel02:
lunarcel02:
lunarcel02:
lunarcel02: Enclosure Device ID: 20
lunarcel02: Slot Number: 9
lunarcel02: Drive's postion: DiskGroup: 9, Span: 0, Arm: 0
lunarcel02: Enclosure position: 0
lunarcel02: Device Id: 10
lunarcel02: WWN: 5000CCA01ACAE8D7
lunarcel02: Sequence Number: 2
lunarcel02: Media Error Count: 0
lunarcel02: Other Error Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Last Predictive Failure Event Seq Number: 0
lunarcel02: PD Type: SAS
lunarcel02: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel02: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel02: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel02: Firmware state: Online, Spun Up
lunarcel02: Is Commissioned Spare : NO
lunarcel02: Device Firmware Level: A142
lunarcel02: Shield Counter: 0
lunarcel02: Successful diagnostics completion on : N/A
lunarcel02: SAS Address(0): 0x5000cca01acae8d5
lunarcel02: SAS Address(1): 0x0
lunarcel02: Connected Port Number: 0(path0)
lunarcel02: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RLLBYG
lunarcel02: FDE Enable: Disable
lunarcel02: Secured: Unsecured
lunarcel02: Locked: Unlocked
lunarcel02: Needs EKM Attention: No
lunarcel02: Foreign State: None
lunarcel02: Device Speed: 6.0Gb/s
lunarcel02: Link Speed: 6.0Gb/s
lunarcel02: Media Type: Hard Disk Device
lunarcel02: Drive Temperature :26C (78.80 F)
lunarcel02: PI Eligibility: No
lunarcel02: Drive is formatted for PI information: No
lunarcel02: PI: No PI
lunarcel02: Drive's write cache : Disabled
lunarcel02: Port-0 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: 6.0Gb/s
lunarcel02: Port-1 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: Unknown
lunarcel02: Drive has flagged a S.M.A.R.T alert : No
lunarcel02:
lunarcel02:
lunarcel02:
lunarcel02: Enclosure Device ID: 20
lunarcel02: Slot Number: 10
lunarcel02: Drive's postion: DiskGroup: 10, Span: 0, Arm: 0
lunarcel02: Enclosure position: 0
lunarcel02: Device Id: 9
lunarcel02: WWN: 5000CCA01ACADFBF
lunarcel02: Sequence Number: 2
lunarcel02: Media Error Count: 0
lunarcel02: Other Error Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Last Predictive Failure Event Seq Number: 0
lunarcel02: PD Type: SAS
lunarcel02: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]

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lunarcel02: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel02: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel02: Firmware state: Online, Spun Up
lunarcel02: Is Commissioned Spare : NO
lunarcel02: Device Firmware Level: A142
lunarcel02: Shield Counter: 0
lunarcel02: Successful diagnostics completion on : N/A
lunarcel02: SAS Address(0): 0x5000cca01acadfb
lunarcel02: SAS Address(1): 0x0
lunarcel02: Connected Port Number: 0(path0)
lunarcel02: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RLKT5G
lunarcel02: FDE Enable: Disable
lunarcel02: Secured: Unsecured
lunarcel02: Locked: Unlocked
lunarcel02: Needs EKM Attention: No
lunarcel02: Foreign State: None
lunarcel02: Device Speed: 6.0Gb/s
lunarcel02: Link Speed: 6.0Gb/s
lunarcel02: Media Type: Hard Disk Device
lunarcel02: Drive Temperature :26C (78.80 F)
lunarcel02: PI Eligibility: No
lunarcel02: Drive is formatted for PI information: No
lunarcel02: PI: No PI
lunarcel02: Drive's write cache : Disabled
lunarcel02: Port-0 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: 6.0Gb/s
lunarcel02: Port-1 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: Unknown
lunarcel02: Drive has flagged a S.M.A.R.T alert : No
lunarcel02:
lunarcel02:
lunarcel02:
lunarcel02: Enclosure Device ID: 20
lunarcel02: Slot Number: 11
lunarcel02: Drive's position: DiskGroup: 11, Span: 0, Arm: 0
lunarcel02: Enclosure position: 0
lunarcel02: Device Id: 8
lunarcel02: WWN: 5000CCA01ACC0D8F
lunarcel02: Sequence Number: 2
lunarcel02: Media Error Count: 0
lunarcel02: Other Error Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Last Predictive Failure Event Seq Number: 0
lunarcel02: PD Type: SAS
lunarcel02: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel02: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel02: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel02: Firmware state: Online, Spun Up
lunarcel02: Is Commissioned Spare : NO
lunarcel02: Device Firmware Level: A142
lunarcel02: Shield Counter: 0
lunarcel02: Successful diagnostics completion on : N/A
lunarcel02: SAS Address(0): 0x5000cca01acc0d8d
lunarcel02: SAS Address(1): 0x0
lunarcel02: Connected Port Number: 0(path0)
lunarcel02: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421226RM6W8G
lunarcel02: FDE Enable: Disable
lunarcel02: Secured: Unsecured
lunarcel02: Locked: Unlocked
lunarcel02: Needs EKM Attention: No
lunarcel02: Foreign State: None

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lunarcel02: Device Speed: 6.0Gb/s
lunarcel02: Link Speed: 6.0Gb/s
lunarcel02: Media Type: Hard Disk Device
lunarcel02: Drive Temperature :26C (78.80 F)
lunarcel02: PI Eligibility: No
lunarcel02: Drive is formatted for PI information: No
lunarcel02: PI: No PI
lunarcel02: Drive's write cache : Disabled
lunarcel02: Port-0 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: 6.0Gb/s
lunarcel02: Port-1 :
lunarcel02: Port status: Active
lunarcel02: Port's Linkspeed: Unknown
lunarcel02: Drive has flagged a S.M.A.R.T alert : No
lunarcel02:
lunarcel02:
lunarcel02:
lunarcel02:
lunarcel02: Exit Code: 0x00
lunarcel03:
lunarcel03: Adapter #0
lunarcel03:
lunarcel03: Enclosure Device ID: 20
lunarcel03: Slot Number: 0
lunarcel03: Drive's position: DiskGroup: 0, Span: 0, Arm: 0
lunarcel03: Enclosure position: 0
lunarcel03: Device Id: 19
lunarcel03: WWN: 5000CCA01ABE8643
lunarcel03: Sequence Number: 2
lunarcel03: Media Error Count: 0
lunarcel03: Other Error Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Last Predictive Failure Event Seq Number: 0
lunarcel03: PD Type: SAS
lunarcel03: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel03: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel03: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel03: Firmware state: Online, Spun Up
lunarcel03: Is Commissioned Spare : NO
lunarcel03: Device Firmware Level: A142
lunarcel03: Shield Counter: 0
lunarcel03: Successful diagnostics completion on : N/A
lunarcel03: SAS Address(0): 0x5000cca01abe8641
lunarcel03: SAS Address(1): 0x0
lunarcel03: Connected Port Number: 0(path0)
lunarcel03: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421225RBT77G
lunarcel03: FDE Enable: Disable
lunarcel03: Secured: Unsecured
lunarcel03: Locked: Unlocked
lunarcel03: Needs EKM Attention: No
lunarcel03: Foreign State: None
lunarcel03: Device Speed: 6.0Gb/s
lunarcel03: Link Speed: 6.0Gb/s
lunarcel03: Media Type: Hard Disk Device
lunarcel03: Drive Temperature :27C (80.60 F)
lunarcel03: PI Eligibility: No
lunarcel03: Drive is formatted for PI information: No
lunarcel03: PI: No PI
lunarcel03: Drive's write cache : Disabled
lunarcel03: Port-0 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: 6.0Gb/s

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lunarcel03: Port-1 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: Unknown
lunarcel03: Drive has flagged a S.M.A.R.T alert : No
lunarcel03:
lunarcel03:
lunarcel03:
lunarcel03: Enclosure Device ID: 20
lunarcel03: Slot Number: 1
lunarcel03: Drive's postion: DiskGroup: 1, Span: 0, Arm: 0
lunarcel03: Enclosure position: 0
lunarcel03: Device Id: 18
lunarcel03: WWN: 500CCA01ABF818B
lunarcel03: Sequence Number: 2
lunarcel03: Media Error Count: 0
lunarcel03: Other Error Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Last Predictive Failure Event Seq Number: 0
lunarcel03: PD Type: SAS
lunarcel03: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel03: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel03: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel03: Firmware state: Online, Spun Up
lunarcel03: Is Commissioned Spare : NO
lunarcel03: Device Firmware Level: A142
lunarcel03: Shield Counter: 0
lunarcel03: Successful diagnostics completion on : N/A
lunarcel03: SAS Address(0): 0x5000cca01abf8189
lunarcel03: SAS Address(1): 0x0
lunarcel03: Connected Port Number: 0(path0)
lunarcel03: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421225RD9Z0G
lunarcel03: FDE Enable: Disable
lunarcel03: Secured: Unsecured
lunarcel03: Locked: Unlocked
lunarcel03: Needs EKM Attention: No
lunarcel03: Foreign State: None
lunarcel03: Device Speed: 6.0Gb/s
lunarcel03: Link Speed: 6.0Gb/s
lunarcel03: Media Type: Hard Disk Device
lunarcel03: Drive Temperature :27C (80.60 F)
lunarcel03: PI Eligibility: No
lunarcel03: Drive is formatted for PI information: No
lunarcel03: PI: No PI
lunarcel03: Drive's write cache : Disabled
lunarcel03: Port-0 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: 6.0Gb/s
lunarcel03: Port-1 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: Unknown
lunarcel03: Drive has flagged a S.M.A.R.T alert : No
lunarcel03:
lunarcel03:
lunarcel03:
lunarcel03: Enclosure Device ID: 20
lunarcel03: Slot Number: 2
lunarcel03: Drive's postion: DiskGroup: 2, Span: 0, Arm: 0
lunarcel03: Enclosure position: 0
lunarcel03: Device Id: 17
lunarcel03: WWN: 500CCA01AC746E7
lunarcel03: Sequence Number: 2
lunarcel03: Media Error Count: 0
lunarcel03: Other Error Count: 0

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lunarcel03: Predictive Failure Count: 0
lunarcel03: Last Predictive Failure Event Seq Number: 0
lunarcel03: PD Type: SAS
lunarcel03: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel03: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel03: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel03: Firmware state: Online, Spun Up
lunarcel03: Is Commissioned Spare : NO
lunarcel03: Device Firmware Level: A142
lunarcel03: Shield Counter: 0
lunarcel03: Successful diagnostics completion on : N/A
lunarcel03: SAS Address(0): 0x5000cca01ac746e5
lunarcel03: SAS Address(1): 0x0
lunarcel03: Connected Port Number: 0(path0)
lunarcel03: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421225RJLG2G
lunarcel03: FDE Enable: Disable
lunarcel03: Secured: Unsecured
lunarcel03: Locked: Unlocked
lunarcel03: Needs EKM Attention: No
lunarcel03: Foreign State: None
lunarcel03: Device Speed: 6.0Gb/s
lunarcel03: Link Speed: 6.0Gb/s
lunarcel03: Media Type: Hard Disk Device
lunarcel03: Drive Temperature :27C (80.60 F)
lunarcel03: PI Eligibility: No
lunarcel03: Drive is formatted for PI information: No
lunarcel03: PI: No PI
lunarcel03: Drive's write cache : Disabled
lunarcel03: Port-0 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: 6.0Gb/s
lunarcel03: Port-1 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: Unknown
lunarcel03: Drive has flagged a S.M.A.R.T alert : No
lunarcel03:
lunarcel03:
lunarcel03: Enclosure Device ID: 20
lunarcel03: Slot Number: 3
lunarcel03: Drive's postion: DiskGroup: 3, Span: 0, Arm: 0
lunarcel03: Enclosure position: 0
lunarcel03: Device Id: 16
lunarcel03: WWN: 5000CCA01AC7AFDB
lunarcel03: Sequence Number: 2
lunarcel03: Media Error Count: 0
lunarcel03: Other Error Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Last Predictive Failure Event Seq Number: 0
lunarcel03: PD Type: SAS
lunarcel03: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel03: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel03: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel03: Firmware state: Online, Spun Up
lunarcel03: Is Commissioned Spare : NO
lunarcel03: Device Firmware Level: A142
lunarcel03: Shield Counter: 0
lunarcel03: Successful diagnostics completion on : N/A
lunarcel03: SAS Address(0): 0x5000cca01ac7afd9
lunarcel03: SAS Address(1): 0x0
lunarcel03: Connected Port Number: 0(path0)
lunarcel03: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421225RJUESG
lunarcel03: FDE Enable: Disable

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lunarcel03: Secured: Unsecured
lunarcel03: Locked: Unlocked
lunarcel03: Needs EKM Attention: No
lunarcel03: Foreign State: None
lunarcel03: Device Speed: 6.0Gb/s
lunarcel03: Link Speed: 6.0Gb/s
lunarcel03: Media Type: Hard Disk Device
lunarcel03: Drive Temperature :27C (80.60 F)
lunarcel03: PI Eligibility: No
lunarcel03: Drive is formatted for PI information: No
lunarcel03: PI: No PI
lunarcel03: Drive's write cache : Disabled
lunarcel03: Port-0 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: 6.0Gb/s
lunarcel03: Port-1 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: Unknown
lunarcel03: Drive has flagged a S.M.A.R.T alert : No
lunarcel03:
lunarcel03:
lunarcel03:
lunarcel03: Enclosure Device ID: 20
lunarcel03: Slot Number: 4
lunarcel03: Drive's postion: DiskGroup: 4, Span: 0, Arm: 0
lunarcel03: Enclosure position: 0
lunarcel03: Device Id: 15
lunarcel03: WWN: 500CCA01AB80323
lunarcel03: Sequence Number: 2
lunarcel03: Media Error Count: 0
lunarcel03: Other Error Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Last Predictive Failure Event Seq Number: 0
lunarcel03: PD Type: SAS
lunarcel03: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel03: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel03: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel03: Firmware state: Online, Spun Up
lunarcel03: Is Commissioned Spare : NO
lunarcel03: Device Firmware Level: A142
lunarcel03: Shield Counter: 0
lunarcel03: Successful diagnostics completion on : N/A
lunarcel03: SAS Address(0): 0x5000cca01ab80321
lunarcel03: SAS Address(1): 0x0
lunarcel03: Connected Port Number: 0(path0)
lunarcel03: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421225R866EG
lunarcel03: FDE Enable: Disable
lunarcel03: Secured: Unsecured
lunarcel03: Locked: Unlocked
lunarcel03: Needs EKM Attention: No
lunarcel03: Foreign State: None
lunarcel03: Device Speed: 6.0Gb/s
lunarcel03: Link Speed: 6.0Gb/s
lunarcel03: Media Type: Hard Disk Device
lunarcel03: Drive Temperature :26C (78.80 F)
lunarcel03: PI Eligibility: No
lunarcel03: Drive is formatted for PI information: No
lunarcel03: PI: No PI
lunarcel03: Drive's write cache : Disabled
lunarcel03: Port-0 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: 6.0Gb/s
lunarcel03: Port-1 :

```

```

lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: Unknown
lunarcel03: Drive has flagged a S.M.A.R.T alert : No
lunarcel03:
lunarcel03:
lunarcel03:
lunarcel03: Enclosure Device ID: 20
lunarcel03: Slot Number: 5
lunarcel03: Drive's postion: DiskGroup: 5, Span: 0, Arm: 0
lunarcel03: Enclosure position: 0
lunarcel03: Device Id: 14
lunarcel03: WWN: 500CCA01AC75587
lunarcel03: Sequence Number: 2
lunarcel03: Media Error Count: 0
lunarcel03: Other Error Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Last Predictive Failure Event Seq Number: 0
lunarcel03: PD Type: SAS
lunarcel03: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel03: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel03: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel03: Firmware state: Online, Spun Up
lunarcel03: Is Commissioned Spare : NO
lunarcel03: Device Firmware Level: A142
lunarcel03: Shield Counter: 0
lunarcel03: Successful diagnostics completion on : N/A
lunarcel03: SAS Address(0): 0x5000cca01ac75585
lunarcel03: SAS Address(1): 0x0
lunarcel03: Connected Port Number: 0(path0)
lunarcel03: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421225RJME8G
lunarcel03: FDE Enable: Disable
lunarcel03: Secured: Unsecured
lunarcel03: Locked: Unlocked
lunarcel03: Needs EKM Attention: No
lunarcel03: Foreign State: None
lunarcel03: Device Speed: 6.0Gb/s
lunarcel03: Link Speed: 6.0Gb/s
lunarcel03: Media Type: Hard Disk Device
lunarcel03: Drive Temperature :26C (78.80 F)
lunarcel03: PI Eligibility: No
lunarcel03: Drive is formatted for PI information: No
lunarcel03: PI: No PI
lunarcel03: Drive's write cache : Disabled
lunarcel03: Port-0 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: 6.0Gb/s
lunarcel03: Port-1 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: Unknown
lunarcel03: Drive has flagged a S.M.A.R.T alert : No
lunarcel03:
lunarcel03:
lunarcel03:
lunarcel03: Enclosure Device ID: 20
lunarcel03: Slot Number: 6
lunarcel03: Drive's postion: DiskGroup: 6, Span: 0, Arm: 0
lunarcel03: Enclosure position: 0
lunarcel03: Device Id: 13
lunarcel03: WWN: 500CCA01AC65EEF
lunarcel03: Sequence Number: 2
lunarcel03: Media Error Count: 0
lunarcel03: Other Error Count: 0
lunarcel03: Predictive Failure Count: 0

```

```

lunarcel03: Last Predictive Failure Event Seq Number: 0
lunarcel03: PD Type: SAS
lunarcel03: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel03: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel03: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel03: Firmware state: Online, Spun Up
lunarcel03: Is Commissioned Spare : NO
lunarcel03: Device Firmware Level: A142
lunarcel03: Shield Counter: 0
lunarcel03: Successful diagnostics completion on : N/A
lunarcel03: SAS Address(0): 0x5000cca01ac65eed
lunarcel03: SAS Address(1): 0x0
lunarcel03: Connected Port Number: 0(path0)
lunarcel03: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421225RJ305G
lunarcel03: FDE Enable: Disable
lunarcel03: Secured: Unsecured
lunarcel03: Locked: Unlocked
lunarcel03: Needs EKM Attention: No
lunarcel03: Foreign State: None
lunarcel03: Device Speed: 6.0Gb/s
lunarcel03: Link Speed: 6.0Gb/s
lunarcel03: Media Type: Hard Disk Device
lunarcel03: Drive Temperature :26C (78.80 F)
lunarcel03: PI Eligibility: No
lunarcel03: Drive is formatted for PI information: No
lunarcel03: PI: No PI
lunarcel03: Drive's write cache : Disabled
lunarcel03: Port-0 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: 6.0Gb/s
lunarcel03: Port-1 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: Unknown
lunarcel03: Drive has flagged a S.M.A.R.T alert : No
lunarcel03:
lunarcel03:
lunarcel03: Enclosure Device ID: 20
lunarcel03: Slot Number: 7
lunarcel03: Drive's position: DiskGroup: 7, Span: 0, Arm: 0
lunarcel03: Enclosure position: 0
lunarcel03: Device Id: 12
lunarcel03: WWN: 5000CCA01AC4541F
lunarcel03: Sequence Number: 2
lunarcel03: Media Error Count: 0
lunarcel03: Other Error Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Last Predictive Failure Event Seq Number: 0
lunarcel03: PD Type: SAS
lunarcel03: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel03: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel03: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel03: Firmware state: Online, Spun Up
lunarcel03: Is Commissioned Spare : NO
lunarcel03: Device Firmware Level: A142
lunarcel03: Shield Counter: 0
lunarcel03: Successful diagnostics completion on : N/A
lunarcel03: SAS Address(0): 0x5000cca01ac4541d
lunarcel03: SAS Address(1): 0x0
lunarcel03: Connected Port Number: 0(path0)
lunarcel03: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421225RGZ5UG
lunarcel03: FDE Enable: Disable
lunarcel03: Secured: Unsecured

```

```

lunarcel03: Locked: Unlocked
lunarcel03: Needs EKM Attention: No
lunarcel03: Foreign State: None
lunarcel03: Device Speed: 6.0Gb/s
lunarcel03: Link Speed: 6.0Gb/s
lunarcel03: Media Type: Hard Disk Device
lunarcel03: Drive Temperature :25C (77.00 F)
lunarcel03: PI Eligibility: No
lunarcel03: Drive is formatted for PI information: No
lunarcel03: PI: No PI
lunarcel03: Drive's write cache : Disabled
lunarcel03: Port-0 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: 6.0Gb/s
lunarcel03: Port-1 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: Unknown
lunarcel03: Drive has flagged a S.M.A.R.T alert : No
lunarcel03:
lunarcel03:
lunarcel03:
lunarcel03: Enclosure Device ID: 20
lunarcel03: Slot Number: 8
lunarcel03: Drive's position: DiskGroup: 8, Span: 0, Arm: 0
lunarcel03: Enclosure position: 0
lunarcel03: Device Id: 11
lunarcel03: WWN: 500CCA01AC69FD3
lunarcel03: Sequence Number: 2
lunarcel03: Media Error Count: 0
lunarcel03: Other Error Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Last Predictive Failure Event Seq Number: 0
lunarcel03: PD Type: SAS
lunarcel03: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel03: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel03: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel03: Firmware state: Online, Spun Up
lunarcel03: Is Commissioned Spare : NO
lunarcel03: Device Firmware Level: A142
lunarcel03: Shield Counter: 0
lunarcel03: Successful diagnostics completion on : N/A
lunarcel03: SAS Address(0): 0x5000cca01ac69fd1
lunarcel03: SAS Address(1): 0x0
lunarcel03: Connected Port Number: 0(path0)
lunarcel03: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421225RJ7A4G
lunarcel03: FDE Enable: Disable
lunarcel03: Secured: Unsecured
lunarcel03: Locked: Unlocked
lunarcel03: Needs EKM Attention: No
lunarcel03: Foreign State: None
lunarcel03: Device Speed: 6.0Gb/s
lunarcel03: Link Speed: 6.0Gb/s
lunarcel03: Media Type: Hard Disk Device
lunarcel03: Drive Temperature :25C (77.00 F)
lunarcel03: PI Eligibility: No
lunarcel03: Drive is formatted for PI information: No
lunarcel03: PI: No PI
lunarcel03: Drive's write cache : Disabled
lunarcel03: Port-0 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: 6.0Gb/s
lunarcel03: Port-1 :
lunarcel03: Port status: Active

```

```

lunarcel03: Port's Linkspeed: Unknown
lunarcel03: Drive has flagged a S.M.A.R.T alert : No
lunarcel03:
lunarcel03:
lunarcel03: Enclosure Device ID: 20
lunarcel03: Slot Number: 9
lunarcel03: Drive's postion: DiskGroup: 9, Span: 0, Arm: 0
lunarcel03: Enclosure position: 0
lunarcel03: Device Id: 10
lunarcel03: WWN: 500CCA01ABE8697
lunarcel03: Sequence Number: 2
lunarcel03: Media Error Count: 0
lunarcel03: Other Error Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Last Predictive Failure Event Seq Number: 0
lunarcel03: PD Type: SAS
lunarcel03: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel03: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel03: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel03: Firmware state: Online, Spun Up
lunarcel03: Is Commissioned Spare : NO
lunarcel03: Device Firmware Level: A142
lunarcel03: Shield Counter: 0
lunarcel03: Successful diagnostics completion on : N/A
lunarcel03: SAS Address(0): 0x5000cca01abe8695
lunarcel03: SAS Address(1): 0x0
lunarcel03: Connected Port Number: 0(path0)
lunarcel03: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421225RBT7XG
lunarcel03: FDE Enable: Disable
lunarcel03: Secured: Unsecured
lunarcel03: Locked: Unlocked
lunarcel03: Needs EKM Attention: No
lunarcel03: Foreign State: None
lunarcel03: Device Speed: 6.0Gb/s
lunarcel03: Link Speed: 6.0Gb/s
lunarcel03: Media Type: Hard Disk Device
lunarcel03: Drive Temperature :26C (78.80 F)
lunarcel03: PI Eligibility: No
lunarcel03: Drive is formatted for PI information: No
lunarcel03: PI: No PI
lunarcel03: Drive's write cache : Disabled
lunarcel03: Port-0 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: 6.0Gb/s
lunarcel03: Port-1 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: Unknown
lunarcel03: Drive has flagged a S.M.A.R.T alert : No
lunarcel03:
lunarcel03:
lunarcel03: Enclosure Device ID: 20
lunarcel03: Slot Number: 10
lunarcel03: Drive's postion: DiskGroup: 10, Span: 0, Arm: 0
lunarcel03: Enclosure position: 0
lunarcel03: Device Id: 9
lunarcel03: WWN: 500CCA01AC43F3F
lunarcel03: Sequence Number: 2
lunarcel03: Media Error Count: 0
lunarcel03: Other Error Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Last Predictive Failure Event Seq Number: 0

```

```

lunarcel03: PD Type: SAS
lunarcel03: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel03: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel03: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel03: Firmware state: Online, Spun Up
lunarcel03: Is Commissioned Spare : NO
lunarcel03: Device Firmware Level: A142
lunarcel03: Shield Counter: 0
lunarcel03: Successful diagnostics completion on : N/A
lunarcel03: SAS Address(0): 0x5000cca01ac43f3d
lunarcel03: SAS Address(1): 0x0
lunarcel03: Connected Port Number: 0(path0)
lunarcel03: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421225RGXTRG
lunarcel03: FDE Enable: Disable
lunarcel03: Secured: Unsecured
lunarcel03: Locked: Unlocked
lunarcel03: Needs EKM Attention: No
lunarcel03: Foreign State: None
lunarcel03: Device Speed: 6.0Gb/s
lunarcel03: Link Speed: 6.0Gb/s
lunarcel03: Media Type: Hard Disk Device
lunarcel03: Drive Temperature :26C (78.80 F)
lunarcel03: PI Eligibility: No
lunarcel03: Drive is formatted for PI information: No
lunarcel03: PI: No PI
lunarcel03: Drive's write cache : Disabled
lunarcel03: Port-0 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: 6.0Gb/s
lunarcel03: Port-1 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: Unknown
lunarcel03: Drive has flagged a S.M.A.R.T alert : No
lunarcel03:
lunarcel03:
lunarcel03: Enclosure Device ID: 20
lunarcel03: Slot Number: 11
lunarcel03: Drive's position: DiskGroup: 11, Span: 0, Arm: 0
lunarcel03: Enclosure position: 0
lunarcel03: Device Id: 8
lunarcel03: WWN: 5000CCA01AC43E77
lunarcel03: Sequence Number: 2
lunarcel03: Media Error Count: 0
lunarcel03: Other Error Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Last Predictive Failure Event Seq Number: 0
lunarcel03: PD Type: SAS
lunarcel03: Raw Size: 2.728 TB [0x15d50a3b0 Sectors]
lunarcel03: Non Coerced Size: 2.728 TB [0x15d40a3b0 Sectors]
lunarcel03: Coerced Size: 2.727 TB [0x15d3ef000 Sectors]
lunarcel03: Firmware state: Online, Spun Up
lunarcel03: Is Commissioned Spare : NO
lunarcel03: Device Firmware Level: A142
lunarcel03: Shield Counter: 0
lunarcel03: Successful diagnostics completion on : N/A
lunarcel03: SAS Address(0): 0x5000cca01ac43e75
lunarcel03: SAS Address(1): 0x0
lunarcel03: Connected Port Number: 0(path0)
lunarcel03: Inquiry Data: HITACHI H7230AS60SUN3.0TA1421225RGXS3G
lunarcel03: FDE Enable: Disable
lunarcel03: Secured: Unsecured
lunarcel03: Locked: Unlocked

```

```

lunarcel03: Needs EKM Attention: No
lunarcel03: Foreign State: None
lunarcel03: Device Speed: 6.0Gb/s
lunarcel03: Link Speed: 6.0Gb/s
lunarcel03: Media Type: Hard Disk Device
lunarcel03: Drive Temperature :25C (77.00 F)
lunarcel03: PI Eligibility: No
lunarcel03: Drive is formatted for PI information: No
lunarcel03: PI: No PI
lunarcel03: Drive's write cache : Disabled
lunarcel03: Port-0 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: 6.0Gb/s
lunarcel03: Port-1 :
lunarcel03: Port status: Active
lunarcel03: Port's Linkspeed: Unknown
lunarcel03: Drive has flagged a S.M.A.R.T alert : No
lunarcel03:
lunarcel03:
lunarcel03:
lunarcel03:
lunarcel03: Exit Code: 0x00

```

```

[root@lunardb01 oracle]# dcli -g cell_group -l root /opt/MegaRAID/MegaCli/MegaCli64
AdpAllInfo -aALL | grep "Device Present" -A 8
lunarcel01: Device Present
lunarcel01: =====
lunarcel01: Virtual Drives      : 12
lunarcel01: Degraded            : 0
lunarcel01: Offline                : 0
lunarcel01: Physical Devices      : 14
lunarcel01: Disks                : 12
lunarcel01: Critical Disks      : 0
lunarcel01: Failed Disks        : 0
--
lunarcel02: Device Present
lunarcel02: =====
lunarcel02: Virtual Drives      : 12
lunarcel02: Degraded            : 0
lunarcel02: Offline                : 0
lunarcel02: Physical Devices      : 14
lunarcel02: Disks                : 12
lunarcel02: Critical Disks      : 0
lunarcel02: Failed Disks        : 0
--
lunarcel03: Device Present
lunarcel03: =====
lunarcel03: Virtual Drives      : 12
lunarcel03: Degraded            : 0
lunarcel03: Offline                : 0
lunarcel03: Physical Devices      : 14
lunarcel03: Disks                : 12
lunarcel03: Critical Disks      : 0
lunarcel03: Failed Disks        : 0

```

```

[root@lunardb01 oracle]# dcli -g cell_group -l root /opt/MegaRAID/MegaCli/MegaCli64
PDList -aALL | grep "Firmware state"
lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Firmware state: Online, Spun Up
lunarcel01: Firmware state: Online, Spun Up

```



```

lunarcel02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel02: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU
lunarcel03: Current Cache Policy: WriteBack, ReadAheadNone, Direct, No Write Cache if
Bad BBU

```

检查结果： 正常

5.5 本地硬盘前瞻性错误检查

```

[root@lunardb01 oracle]# dcli -g cell_group -l root
/opt/MegaRAID/MegaCli/MegaCli64 -LdPdInfo -aALL |grep "Predictive Failure Count"
lunarcel01: Predictive Failure Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Predictive Failure Count: 0
lunarcel01: Predictive Failure Count: 0

```

```
lunarcel02: Predictive Failure Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel02: Predictive Failure Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Predictive Failure Count: 0
lunarcel03: Predictive Failure Count: 0
```

检查结果： 正常

5.6 控制器电池充电状态及温度

```
[root@lunardb01 oracle]# dcli -g cell_group -l root /opt/MegaRAID/MegaCli/MegaCli64
-AdpBbuCmd -a0 | grep "Full Charge" -A5 | sort | grep Full -A1
lunarcel01: Full Charge Capacity: 1374 mAh
lunarcel01: Run time to empty: Battery is not being discharged
--
lunarcel02: Full Charge Capacity: 1352 mAh
lunarcel02: Run time to empty: Battery is not being discharged
--
lunarcel03: Full Charge Capacity: 1353 mAh
lunarcel03: Run time to empty: Battery is not being discharged

[root@lunardb01 oracle]# dcli -g cell_group -l root /opt/MegaRAID/MegaCli/MegaCli64
-AdpBbuCmd -a0 | grep BatteryType
lunarcel01: BatteryType: iBBU08
lunarcel02: BatteryType: iBBU08
lunarcel03: BatteryType: iBBU08
[root@lunardb01 oracle]# dcli -g cell_group -l root /opt/MegaRAID/MegaCli/MegaCli64
-AdpBbuCmd -a0 | grep -i temper
lunarcel01: Temperature: 40 C
lunarcel01: Temperature                               : OK
lunarcel01: Over Temperature                           : No
lunarcel02: Temperature: 38 C
lunarcel02: Temperature                               : OK
lunarcel02: Over Temperature                           : No
lunarcel03: Temperature: 39 C
lunarcel03: Temperature                               : OK
lunarcel03: Over Temperature                           : No
```

检查结果： 正常

5.7 验证硬件与Firmware是否匹配

```
[root@lunardb01 oracle]# dcli -g cell_group -l root
/opt/oracle.SupportTools/CheckHWnFWProfile
lunarccl01: [SUCCESS] The hardware and firmware profile matches one of the supported
profiles
lunarccl02: [SUCCESS] The hardware and firmware profile matches one of the supported
profiles
lunarccl03: [SUCCESS] The hardware and firmware profile matches one of the supported
profiles
```

检查结果：正常

5.8 验证软件配置是否一致

```
[root@lunardb01 oracle]# dcli -g cell_group -l root
/opt/oracle.SupportTools/CheckSWProfile.sh -c
lunarccl01:
lunarccl01: [INFO] SUCCESS: Meets requirements of operating platform and InfiniBand
software.
lunarccl01: [INFO] Check does NOT verify correctness of configuration for installed
software.
lunarccl01:
lunarccl02:
lunarccl02: [INFO] SUCCESS: Meets requirements of operating platform and InfiniBand
software.
lunarccl02: [INFO] Check does NOT verify correctness of configuration for installed
software.
lunarccl02:
lunarccl03:
lunarccl03: [INFO] SUCCESS: Meets requirements of operating platform and InfiniBand
software.
lunarccl03: [INFO] Check does NOT verify correctness of configuration for installed
software.
lunarccl03:
```

检查结果：正常

5.9 检查硬盘和闪存Firmware版本

```
[root@lunardb01 oracle]# dcli -g cell_group -l root "cellcli -e list physicaldisk detail"
lunarccl01: name:                20:0
lunarccl01: deviceId:            19
lunarccl01: diskType:            HardDisk
lunarccl01: enclosureDeviceId:   20
lunarccl01: errMediaCount:       0
lunarccl01: errOtherCount:       0
lunarccl01: foreignState:        false
lunarccl01: luns:                0_0
lunarccl01: makeModel:           "HITACHI H7230AS60SUN3.0T"
lunarccl01: physicalFirmware:     A142
lunarccl01: physicalInsertTime:   2012-08-11T18:19:56+08:00
lunarccl01: physicalInterface:   sata
lunarccl01: physicalSerial:       RJ382G
lunarccl01: physicalSize:         2793.4719999991357G
lunarccl01: slotNumber:          0
lunarccl01: status:              normal
lunarccl01:
lunarccl01: name:                20:1
lunarccl01: deviceId:            18
```

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lunarcel01: diskType:          HardDisk
lunarcel01: enclosureDeviceId: 20
lunarcel01: errMediaCount:     0
lunarcel01: errOtherCount:     0
lunarcel01: foreignState:      false
lunarcel01: luns:              0_1
lunarcel01: makeModel:         "HITACHI H7230AS60SUN3.0T"
lunarcel01: physicalFirmware:   A142
lunarcel01: physicalInsertTime: 2012-08-11T18:19:58+08:00
lunarcel01: physicalInterface: sata
lunarcel01: physicalSerial:     RKU7DG
lunarcel01: physicalSize:       2793.4719999991357G
lunarcel01: slotNumber:        1
lunarcel01: status:            normal
lunarcel01:
lunarcel01: name:              20:2
lunarcel01: deviceId:          17
lunarcel01: diskType:          HardDisk
lunarcel01: enclosureDeviceId: 20
lunarcel01: errMediaCount:     0
lunarcel01: errOtherCount:     0
lunarcel01: foreignState:      false
lunarcel01: luns:              0_2
lunarcel01: makeModel:         "HITACHI H7230AS60SUN3.0T"
lunarcel01: physicalFirmware:   A142
lunarcel01: physicalInsertTime: 2012-08-11T18:19:59+08:00
lunarcel01: physicalInterface: sata
lunarcel01: physicalSerial:     RKD0BG
lunarcel01: physicalSize:       2793.4719999991357G
lunarcel01: slotNumber:        2
lunarcel01: status:            normal
lunarcel01:
lunarcel01: name:              20:3
lunarcel01: deviceId:          16
lunarcel01: diskType:          HardDisk
lunarcel01: enclosureDeviceId: 20
lunarcel01: errMediaCount:     0
lunarcel01: errOtherCount:     0
lunarcel01: foreignState:      false
lunarcel01: luns:              0_3
lunarcel01: makeModel:         "HITACHI H7230AS60SUN3.0T"
lunarcel01: physicalFirmware:   A142
lunarcel01: physicalInsertTime: 2012-08-11T18:20:01+08:00
lunarcel01: physicalInterface: sata
lunarcel01: physicalSerial:     RJZW3G
lunarcel01: physicalSize:       2793.4719999991357G
lunarcel01: slotNumber:        3
lunarcel01: status:            normal
lunarcel01:
lunarcel01: name:              20:4
lunarcel01: deviceId:          15
lunarcel01: diskType:          HardDisk
lunarcel01: enclosureDeviceId: 20
lunarcel01: errMediaCount:     0
lunarcel01: errOtherCount:     0
lunarcel01: foreignState:      false
lunarcel01: luns:              0_4
lunarcel01: makeModel:         "HITACHI H7230AS60SUN3.0T"
lunarcel01: physicalFirmware:   A142
lunarcel01: physicalInsertTime: 2012-08-11T18:20:03+08:00
lunarcel01: physicalInterface: sata
lunarcel01: physicalSerial:     RBMASG
lunarcel01: physicalSize:       2793.4719999991357G

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lunarcel01: slotNumber:      4
lunarcel01: status:          normal
lunarcel01:
lunarcel01: name:            20:5
lunarcel01: deviceId:        14
lunarcel01: diskType:        HardDisk
lunarcel01: enclosureDeviceId: 20
lunarcel01: errMediaCount:    0
lunarcel01: errOtherCount:    0
lunarcel01: foreignState:     false
lunarcel01: luns:            0_5
lunarcel01: makeModel:        "HITACHI H7230AS60SUN3.0T"
lunarcel01: physicalFirmware: A142
lunarcel01: physicalInsertTime: 2012-08-11T18:20:05+08:00
lunarcel01: physicalInterface: sata
lunarcel01: physicalSerial:    RVN9KD
lunarcel01: physicalSize:      2793.4719999991357G
lunarcel01: slotNumber:        5
lunarcel01: status:            normal
lunarcel01:
lunarcel01: name:            20:6
lunarcel01: deviceId:        13
lunarcel01: diskType:        HardDisk
lunarcel01: enclosureDeviceId: 20
lunarcel01: errMediaCount:    0
lunarcel01: errOtherCount:    0
lunarcel01: foreignState:     false
lunarcel01: luns:            0_6
lunarcel01: makeModel:        "HITACHI H7230AS60SUN3.0T"
lunarcel01: physicalFirmware: A142
lunarcel01: physicalInsertTime: 2012-08-11T18:20:06+08:00
lunarcel01: physicalInterface: sata
lunarcel01: physicalSerial:    RVN07D
lunarcel01: physicalSize:      2793.4719999991357G
lunarcel01: slotNumber:        6
lunarcel01: status:            normal
lunarcel01:
lunarcel01: name:            20:7
lunarcel01: deviceId:        12
lunarcel01: diskType:        HardDisk
lunarcel01: enclosureDeviceId: 20
lunarcel01: errMediaCount:    0
lunarcel01: errOtherCount:    0
lunarcel01: foreignState:     false
lunarcel01: luns:            0_7
lunarcel01: makeModel:        "HITACHI H7230AS60SUN3.0T"
lunarcel01: physicalFirmware: A142
lunarcel01: physicalInsertTime: 2012-08-11T18:20:08+08:00
lunarcel01: physicalInterface: sata
lunarcel01: physicalSerial:    RZW4JG
lunarcel01: physicalSize:      2793.4719999991357G
lunarcel01: slotNumber:        7
lunarcel01: status:            normal
lunarcel01:
lunarcel01: name:            20:8
lunarcel01: deviceId:        11
lunarcel01: diskType:        HardDisk
lunarcel01: enclosureDeviceId: 20
lunarcel01: errMediaCount:    0
lunarcel01: errOtherCount:    0
lunarcel01: foreignState:     false
lunarcel01: luns:            0_8
lunarcel01: makeModel:        "HITACHI H7230AS60SUN3.0T"

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lunarcel01: physicalFirmware: A142
lunarcel01: physicalInsertTime: 2012-08-11T18:20:10+08:00
lunarcel01: physicalInterface: sata
lunarcel01: physicalSerial: RANJPG
lunarcel01: physicalSize: 2793.4719999991357G
lunarcel01: slotNumber: 8
lunarcel01: status: normal
lunarcel01:
lunarcel01: name: 20:9
lunarcel01: deviceId: 10
lunarcel01: diskType: HardDisk
lunarcel01: enclosureDeviceId: 20
lunarcel01: errMediaCount: 0
lunarcel01: errOtherCount: 0
lunarcel01: foreignState: false
lunarcel01: luns: 0_9
lunarcel01: makeModel: "HITACHI H7230AS60SUN3.0T"
lunarcel01: physicalFirmware: A142
lunarcel01: physicalInsertTime: 2012-08-11T18:20:12+08:00
lunarcel01: physicalInterface: sata
lunarcel01: physicalSerial: RANHVG
lunarcel01: physicalSize: 2793.4719999991357G
lunarcel01: slotNumber: 9
lunarcel01: status: normal
lunarcel01:
lunarcel01: name: 20:10
lunarcel01: deviceId: 9
lunarcel01: diskType: HardDisk
lunarcel01: enclosureDeviceId: 20
lunarcel01: errMediaCount: 0
lunarcel01: errOtherCount: 0
lunarcel01: foreignState: false
lunarcel01: luns: 0_10
lunarcel01: makeModel: "HITACHI H7230AS60SUN3.0T"
lunarcel01: physicalFirmware: A142
lunarcel01: physicalInsertTime: 2012-08-11T18:20:13+08:00
lunarcel01: physicalInterface: sata
lunarcel01: physicalSerial: RANJNG
lunarcel01: physicalSize: 2793.4719999991357G
lunarcel01: slotNumber: 10
lunarcel01: status: normal
lunarcel01:
lunarcel01: name: 20:11
lunarcel01: deviceId: 8
lunarcel01: diskType: HardDisk
lunarcel01: enclosureDeviceId: 20
lunarcel01: errMediaCount: 0
lunarcel01: errOtherCount: 0
lunarcel01: foreignState: false
lunarcel01: luns: 0_11
lunarcel01: makeModel: "HITACHI H7230AS60SUN3.0T"
lunarcel01: physicalFirmware: A142
lunarcel01: physicalInsertTime: 2012-08-11T18:20:15+08:00
lunarcel01: physicalInterface: sata
lunarcel01: physicalSerial: RZW4LG
lunarcel01: physicalSize: 2793.4719999991357G
lunarcel01: slotNumber: 11
lunarcel01: status: normal
lunarcel01:
lunarcel01: name: FLASH_1_0
lunarcel01: diskType: FlashDisk
lunarcel01: luns: 1_0
lunarcel01: makeModel: "MARVELL SD88SA02"

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lunarcel01: physicalFirmware:      D20Y
lunarcel01: physicalInsertTime:    2012-08-11T18:20:15+08:00
lunarcel01: physicalSize:          22.8880615234375G
lunarcel01: slotNumber:            "PCI Slot: 1; FDOM: 0"
lunarcel01: status:                normal
lunarcel01:
lunarcel01: name:                  FLASH_1_1
lunarcel01: diskType:              FlashDisk
lunarcel01: luns:                  1_1
lunarcel01: makeModel:             "MARVELL SD88SA02"
lunarcel01: physicalFirmware:      D20Y
lunarcel01: physicalInsertTime:    2012-08-11T18:20:15+08:00
lunarcel01: physicalSize:          22.8880615234375G
lunarcel01: slotNumber:            "PCI Slot: 1; FDOM: 1"
lunarcel01: status:                normal
lunarcel01:
lunarcel01: name:                  FLASH_1_2
lunarcel01: diskType:              FlashDisk
lunarcel01: luns:                  1_2
lunarcel01: makeModel:             "MARVELL SD88SA02"
lunarcel01: physicalFirmware:      D20Y
lunarcel01: physicalInsertTime:    2012-08-11T18:20:15+08:00
lunarcel01: physicalSize:          22.8880615234375G
lunarcel01: slotNumber:            "PCI Slot: 1; FDOM: 2"
lunarcel01: status:                normal
lunarcel01:
lunarcel01: name:                  FLASH_1_3
lunarcel01: diskType:              FlashDisk
lunarcel01: luns:                  1_3
lunarcel01: makeModel:             "MARVELL SD88SA02"
lunarcel01: physicalFirmware:      D20Y
lunarcel01: physicalInsertTime:    2012-08-11T18:20:15+08:00
lunarcel01: physicalSize:          22.8880615234375G
lunarcel01: slotNumber:            "PCI Slot: 1; FDOM: 3"
lunarcel01: status:                normal
lunarcel01:
lunarcel01: name:                  FLASH_2_0
lunarcel01: diskType:              FlashDisk
lunarcel01: luns:                  2_0
lunarcel01: makeModel:             "MARVELL SD88SA02"
lunarcel01: physicalFirmware:      D20Y
lunarcel01: physicalInsertTime:    2012-08-11T18:20:15+08:00
lunarcel01: physicalSize:          22.8880615234375G
lunarcel01: slotNumber:            "PCI Slot: 2; FDOM: 0"
lunarcel01: status:                normal
lunarcel01:
lunarcel01: name:                  FLASH_2_1
lunarcel01: diskType:              FlashDisk
lunarcel01: luns:                  2_1
lunarcel01: makeModel:             "MARVELL SD88SA02"
lunarcel01: physicalFirmware:      D20Y
lunarcel01: physicalInsertTime:    2012-08-11T18:20:15+08:00
lunarcel01: physicalSize:          22.8880615234375G
lunarcel01: slotNumber:            "PCI Slot: 2; FDOM: 1"
lunarcel01: status:                normal
lunarcel01:
lunarcel01: name:                  FLASH_2_2
lunarcel01: diskType:              FlashDisk
lunarcel01: luns:                  2_2
lunarcel01: makeModel:             "MARVELL SD88SA02"
lunarcel01: physicalFirmware:      D20Y
lunarcel01: physicalInsertTime:    2012-08-11T18:20:15+08:00
lunarcel01: physicalSize:          22.8880615234375G

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lunarcel01: slotNumber:	"PCI Slot: 2; FDOM: 2"
lunarcel01: status:	normal
lunarcel01:	
lunarcel01: name:	FLASH_2_3
lunarcel01: diskType:	FlashDisk
lunarcel01: luns:	2_3
lunarcel01: makeModel:	"MARVELL SD88SA02"
lunarcel01: physicalFirmware:	D20Y
lunarcel01: physicalInsertTime:	2012-08-11T18:20:15+08:00
lunarcel01: physicalSize:	22.8880615234375G
lunarcel01: slotNumber:	"PCI Slot: 2; FDOM: 3"
lunarcel01: status:	normal
lunarcel01:	
lunarcel01: name:	FLASH_4_0
lunarcel01: diskType:	FlashDisk
lunarcel01: luns:	4_0
lunarcel01: makeModel:	"MARVELL SD88SA02"
lunarcel01: physicalFirmware:	D20Y
lunarcel01: physicalInsertTime:	2012-08-11T18:20:15+08:00
lunarcel01: physicalSize:	22.8880615234375G
lunarcel01: slotNumber:	"PCI Slot: 4; FDOM: 0"
lunarcel01: status:	normal
lunarcel01:	
lunarcel01: name:	FLASH_4_1
lunarcel01: diskType:	FlashDisk
lunarcel01: luns:	4_1
lunarcel01: makeModel:	"MARVELL SD88SA02"
lunarcel01: physicalFirmware:	D20Y
lunarcel01: physicalInsertTime:	2012-08-11T18:20:15+08:00
lunarcel01: physicalSize:	22.8880615234375G
lunarcel01: slotNumber:	"PCI Slot: 4; FDOM: 1"
lunarcel01: status:	normal
lunarcel01:	
lunarcel01: name:	FLASH_4_2
lunarcel01: diskType:	FlashDisk
lunarcel01: luns:	4_2
lunarcel01: makeModel:	"MARVELL SD88SA02"
lunarcel01: physicalFirmware:	D20Y
lunarcel01: physicalInsertTime:	2012-08-11T18:20:15+08:00
lunarcel01: physicalSize:	22.8880615234375G
lunarcel01: slotNumber:	"PCI Slot: 4; FDOM: 2"
lunarcel01: status:	normal
lunarcel01:	
lunarcel01: name:	FLASH_4_3
lunarcel01: diskType:	FlashDisk
lunarcel01: luns:	4_3
lunarcel01: makeModel:	"MARVELL SD88SA02"
lunarcel01: physicalFirmware:	D20Y
lunarcel01: physicalInsertTime:	2012-08-11T18:20:15+08:00
lunarcel01: physicalSize:	22.8880615234375G
lunarcel01: slotNumber:	"PCI Slot: 4; FDOM: 3"
lunarcel01: status:	normal
lunarcel01:	
lunarcel01: name:	FLASH_5_0
lunarcel01: diskType:	FlashDisk
lunarcel01: luns:	5_0
lunarcel01: makeModel:	"MARVELL SD88SA02"
lunarcel01: physicalFirmware:	D20Y
lunarcel01: physicalInsertTime:	2012-08-11T18:20:15+08:00
lunarcel01: physicalSize:	22.8880615234375G
lunarcel01: slotNumber:	"PCI Slot: 5; FDOM: 0"
lunarcel01: status:	normal
lunarcel01:	

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lunarcel01: name: FLASH_5_1
lunarcel01: diskType: FlashDisk
lunarcel01: luns: 5_1
lunarcel01: makeModel: "MARVELL SD88SA02"
lunarcel01: physicalFirmware: D20Y
lunarcel01: physicalInsertTime: 2012-08-11T18:20:15+08:00
lunarcel01: physicalSize: 22.8880615234375G
lunarcel01: slotNumber: "PCI Slot: 5; FDOM: 1"
lunarcel01: status: normal
lunarcel01:
lunarcel01: name: FLASH_5_2
lunarcel01: diskType: FlashDisk
lunarcel01: luns: 5_2
lunarcel01: makeModel: "MARVELL SD88SA02"
lunarcel01: physicalFirmware: D20Y
lunarcel01: physicalInsertTime: 2012-08-11T18:20:15+08:00
lunarcel01: physicalSize: 22.8880615234375G
lunarcel01: slotNumber: "PCI Slot: 5; FDOM: 2"
lunarcel01: status: normal
lunarcel01:
lunarcel01: name: FLASH_5_3
lunarcel01: diskType: FlashDisk
lunarcel01: luns: 5_3
lunarcel01: makeModel: "MARVELL SD88SA02"
lunarcel01: physicalFirmware: D20Y
lunarcel01: physicalInsertTime: 2012-08-11T18:20:15+08:00
lunarcel01: physicalSize: 22.8880615234375G
lunarcel01: slotNumber: "PCI Slot: 5; FDOM: 3"
lunarcel01: status: normal
lunarcel02: name: 20:0
lunarcel02: deviceId: 19
lunarcel02: diskType: HardDisk
lunarcel02: enclosureDeviceId: 20
lunarcel02: errMediaCount: 0
lunarcel02: errOtherCount: 0
lunarcel02: foreignState: false
lunarcel02: luns: 0_0
lunarcel02: makeModel: "HITACHI H7230AS60SUN3.0T"
lunarcel02: physicalFirmware: A142
lunarcel02: physicalInsertTime: 2012-08-11T18:21:25+08:00
lunarcel02: physicalInterface: sata
lunarcel02: physicalSerial: RM7MXG
lunarcel02: physicalSize: 2793.4719999991357G
lunarcel02: slotNumber: 0
lunarcel02: status: normal
lunarcel02:
lunarcel02: name: 20:1
lunarcel02: deviceId: 18
lunarcel02: diskType: HardDisk
lunarcel02: enclosureDeviceId: 20
lunarcel02: errMediaCount: 0
lunarcel02: errOtherCount: 0
lunarcel02: foreignState: false
lunarcel02: luns: 0_1
lunarcel02: makeModel: "HITACHI H7230AS60SUN3.0T"
lunarcel02: physicalFirmware: A142
lunarcel02: physicalInsertTime: 2012-08-11T18:21:26+08:00
lunarcel02: physicalInterface: sata
lunarcel02: physicalSerial: RMBHLD
lunarcel02: physicalSize: 2793.4719999991357G
lunarcel02: slotNumber: 1
lunarcel02: status: normal
lunarcel02:

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lunarcel02: name:                20:2
lunarcel02: deviceId:            17
lunarcel02: diskType:            HardDisk
lunarcel02: enclosureDeviceId:   20
lunarcel02: errMediaCount:       0
lunarcel02: errOtherCount:       0
lunarcel02: foreignState:        false
lunarcel02: luns:                0_2
lunarcel02: makeModel:           "HITACHI H7230AS60SUN3.0T"
lunarcel02: physicalFirmware:    A142
lunarcel02: physicalInsertTime:  2012-08-11T18:21:28+08:00
lunarcel02: physicalInterface:   sata
lunarcel02: physicalSerial:      RLLBAG
lunarcel02: physicalSize:        2793.4719999991357G
lunarcel02: slotNumber:          2
lunarcel02: status:              normal
lunarcel02:
lunarcel02: name:                20:3
lunarcel02: deviceId:            16
lunarcel02: diskType:            HardDisk
lunarcel02: enclosureDeviceId:   20
lunarcel02: errMediaCount:       0
lunarcel02: errOtherCount:       0
lunarcel02: foreignState:        false
lunarcel02: luns:                0_3
lunarcel02: makeModel:           "HITACHI H7230AS60SUN3.0T"
lunarcel02: physicalFirmware:    A142
lunarcel02: physicalInsertTime:  2012-08-11T18:21:30+08:00
lunarcel02: physicalInterface:   sata
lunarcel02: physicalSerial:      RLLD5G
lunarcel02: physicalSize:        2793.4719999991357G
lunarcel02: slotNumber:          3
lunarcel02: status:              normal
lunarcel02:
lunarcel02: name:                20:4
lunarcel02: deviceId:            15
lunarcel02: diskType:            HardDisk
lunarcel02: enclosureDeviceId:   20
lunarcel02: errMediaCount:       0
lunarcel02: errOtherCount:       0
lunarcel02: foreignState:        false
lunarcel02: luns:                0_4
lunarcel02: makeModel:           "HITACHI H7230AS60SUN3.0T"
lunarcel02: physicalFirmware:    A142
lunarcel02: physicalInsertTime:  2012-08-11T18:21:32+08:00
lunarcel02: physicalInterface:   sata
lunarcel02: physicalSerial:      RLL00G
lunarcel02: physicalSize:        2793.4719999991357G
lunarcel02: slotNumber:          4
lunarcel02: status:              normal
lunarcel02:
lunarcel02: name:                20:5
lunarcel02: deviceId:            14
lunarcel02: diskType:            HardDisk
lunarcel02: enclosureDeviceId:   20
lunarcel02: errMediaCount:       0
lunarcel02: errOtherCount:       0
lunarcel02: foreignState:        false
lunarcel02: luns:                0_5
lunarcel02: makeModel:           "HITACHI H7230AS60SUN3.0T"
lunarcel02: physicalFirmware:    A142
lunarcel02: physicalInsertTime:  2012-08-11T18:21:33+08:00
lunarcel02: physicalInterface:   sata

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lunarcel02: physicalSerial:	RLLARG
lunarcel02: physicalSize:	2793.4719999991357G
lunarcel02: slotNumber:	5
lunarcel02: status:	normal
lunarcel02:	
lunarcel02: name:	20:6
lunarcel02: deviceId:	13
lunarcel02: diskType:	HardDisk
lunarcel02: enclosureDeviceId:	20
lunarcel02: errMediaCount:	0
lunarcel02: errOtherCount:	0
lunarcel02: foreignState:	false
lunarcel02: luns:	0_6
lunarcel02: makeModel:	"HITACHI H7230AS60SUN3.0T"
lunarcel02: physicalFirmware:	A142
lunarcel02: physicalInsertTime:	2012-08-11T18:21:35+08:00
lunarcel02: physicalInterface:	sata
lunarcel02: physicalSerial:	RM704G
lunarcel02: physicalSize:	2793.4719999991357G
lunarcel02: slotNumber:	6
lunarcel02: status:	normal
lunarcel02:	
lunarcel02: name:	20:7
lunarcel02: deviceId:	12
lunarcel02: diskType:	HardDisk
lunarcel02: enclosureDeviceId:	20
lunarcel02: errMediaCount:	0
lunarcel02: errOtherCount:	0
lunarcel02: foreignState:	false
lunarcel02: luns:	0_7
lunarcel02: makeModel:	"HITACHI H7230AS60SUN3.0T"
lunarcel02: physicalFirmware:	A142
lunarcel02: physicalInsertTime:	2012-08-11T18:21:37+08:00
lunarcel02: physicalInterface:	sata
lunarcel02: physicalSerial:	RL8HVG
lunarcel02: physicalSize:	2793.4719999991357G
lunarcel02: slotNumber:	7
lunarcel02: status:	normal
lunarcel02:	
lunarcel02: name:	20:8
lunarcel02: deviceId:	11
lunarcel02: diskType:	HardDisk
lunarcel02: enclosureDeviceId:	20
lunarcel02: errMediaCount:	0
lunarcel02: errOtherCount:	0
lunarcel02: foreignState:	false
lunarcel02: luns:	0_8
lunarcel02: makeModel:	"HITACHI H7230AS60SUN3.0T"
lunarcel02: physicalFirmware:	A142
lunarcel02: physicalInsertTime:	2012-08-11T18:21:38+08:00
lunarcel02: physicalInterface:	sata
lunarcel02: physicalSerial:	RM6VVG
lunarcel02: physicalSize:	2793.4719999991357G
lunarcel02: slotNumber:	8
lunarcel02: status:	normal
lunarcel02:	
lunarcel02: name:	20:9
lunarcel02: deviceId:	10
lunarcel02: diskType:	HardDisk
lunarcel02: enclosureDeviceId:	20
lunarcel02: errMediaCount:	0
lunarcel02: errOtherCount:	0
lunarcel02: foreignState:	false

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lunarcel02: luns: 0_9
lunarcel02: makeModel: "HITACHI H7230AS60SUN3.0T"
lunarcel02: physicalFirmware: A142
lunarcel02: physicalInsertTime: 2012-08-11T18:21:40+08:00
lunarcel02: physicalInterface: sata
lunarcel02: physicalSerial: RLLBYG
lunarcel02: physicalSize: 2793.4719999991357G
lunarcel02: slotNumber: 9
lunarcel02: status: normal
lunarcel02:
lunarcel02: name: 20:10
lunarcel02: deviceId: 9
lunarcel02: diskType: HardDisk
lunarcel02: enclosureDeviceId: 20
lunarcel02: errMediaCount: 0
lunarcel02: errOtherCount: 0
lunarcel02: foreignState: false
lunarcel02: luns: 0_10
lunarcel02: makeModel: "HITACHI H7230AS60SUN3.0T"
lunarcel02: physicalFirmware: A142
lunarcel02: physicalInsertTime: 2012-08-11T18:21:42+08:00
lunarcel02: physicalInterface: sata
lunarcel02: physicalSerial: RLKT5G
lunarcel02: physicalSize: 2793.4719999991357G
lunarcel02: slotNumber: 10
lunarcel02: status: normal
lunarcel02:
lunarcel02: name: 20:11
lunarcel02: deviceId: 8
lunarcel02: diskType: HardDisk
lunarcel02: enclosureDeviceId: 20
lunarcel02: errMediaCount: 0
lunarcel02: errOtherCount: 0
lunarcel02: foreignState: false
lunarcel02: luns: 0_11
lunarcel02: makeModel: "HITACHI H7230AS60SUN3.0T"
lunarcel02: physicalFirmware: A142
lunarcel02: physicalInsertTime: 2012-08-11T18:21:43+08:00
lunarcel02: physicalInterface: sata
lunarcel02: physicalSerial: RM6W8G
lunarcel02: physicalSize: 2793.4719999991357G
lunarcel02: slotNumber: 11
lunarcel02: status: normal
lunarcel02:
lunarcel02: name: FLASH_1_0
lunarcel02: diskType: FlashDisk
lunarcel02: luns: 1_0
lunarcel02: makeModel: "MARVELL SD88SA02"
lunarcel02: physicalFirmware: D20Y
lunarcel02: physicalInsertTime: 2012-08-11T18:21:43+08:00
lunarcel02: physicalSize: 22.8880615234375G
lunarcel02: slotNumber: "PCI Slot: 1; FDOM: 0"
lunarcel02: status: normal
lunarcel02:
lunarcel02: name: FLASH_1_1
lunarcel02: diskType: FlashDisk
lunarcel02: luns: 1_1
lunarcel02: makeModel: "MARVELL SD88SA02"
lunarcel02: physicalFirmware: D20Y
lunarcel02: physicalInsertTime: 2012-08-11T18:21:43+08:00
lunarcel02: physicalSize: 22.8880615234375G
lunarcel02: slotNumber: "PCI Slot: 1; FDOM: 1"
lunarcel02: status: normal

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lunarcel02:
lunarcel02: name:                FLASH_1_2
lunarcel02: diskType:            FlashDisk
lunarcel02: luns:                1_2
lunarcel02: makeModel:          "MARVELL SD88SA02"
lunarcel02: physicalFirmware:    D20Y
lunarcel02: physicalInsertTime: 2012-08-11T18:21:43+08:00
lunarcel02: physicalSize:        22.8880615234375G
lunarcel02: slotNumber:          "PCI Slot: 1; FDOM: 2"
lunarcel02: status:              normal
lunarcel02:
lunarcel02: name:                FLASH_1_3
lunarcel02: diskType:            FlashDisk
lunarcel02: luns:                1_3
lunarcel02: makeModel:          "MARVELL SD88SA02"
lunarcel02: physicalFirmware:    D20Y
lunarcel02: physicalInsertTime: 2012-08-11T18:21:43+08:00
lunarcel02: physicalSize:        22.8880615234375G
lunarcel02: slotNumber:          "PCI Slot: 1; FDOM: 3"
lunarcel02: status:              normal
lunarcel02:
lunarcel02: name:                FLASH_2_0
lunarcel02: diskType:            FlashDisk
lunarcel02: luns:                2_0
lunarcel02: makeModel:          "MARVELL SD88SA02"
lunarcel02: physicalFirmware:    D20Y
lunarcel02: physicalInsertTime: 2012-08-11T18:21:43+08:00
lunarcel02: physicalSize:        22.8880615234375G
lunarcel02: slotNumber:          "PCI Slot: 2; FDOM: 0"
lunarcel02: status:              normal
lunarcel02:
lunarcel02: name:                FLASH_2_1
lunarcel02: diskType:            FlashDisk
lunarcel02: luns:                2_1
lunarcel02: makeModel:          "MARVELL SD88SA02"
lunarcel02: physicalFirmware:    D20Y
lunarcel02: physicalInsertTime: 2012-08-11T18:21:43+08:00
lunarcel02: physicalSize:        22.8880615234375G
lunarcel02: slotNumber:          "PCI Slot: 2; FDOM: 1"
lunarcel02: status:              normal
lunarcel02:
lunarcel02: name:                FLASH_2_2
lunarcel02: diskType:            FlashDisk
lunarcel02: luns:                2_2
lunarcel02: makeModel:          "MARVELL SD88SA02"
lunarcel02: physicalFirmware:    D20Y
lunarcel02: physicalInsertTime: 2012-08-11T18:21:43+08:00
lunarcel02: physicalSize:        22.8880615234375G
lunarcel02: slotNumber:          "PCI Slot: 2; FDOM: 2"
lunarcel02: status:              normal
lunarcel02:
lunarcel02: name:                FLASH_2_3
lunarcel02: diskType:            FlashDisk
lunarcel02: luns:                2_3
lunarcel02: makeModel:          "MARVELL SD88SA02"
lunarcel02: physicalFirmware:    D20Y
lunarcel02: physicalInsertTime: 2012-08-11T18:21:43+08:00
lunarcel02: physicalSize:        22.8880615234375G
lunarcel02: slotNumber:          "PCI Slot: 2; FDOM: 3"
lunarcel02: status:              normal
lunarcel02:
lunarcel02: name:                FLASH_4_0
lunarcel02: diskType:            FlashDisk

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lunarcel02: luns: 4_0
lunarcel02: makeModel: "MARVELL SD88SA02"
lunarcel02: physicalFirmware: D20Y
lunarcel02: physicalInsertTime: 2012-08-11T18:21:43+08:00
lunarcel02: physicalSize: 22.8880615234375G
lunarcel02: slotNumber: "PCI Slot: 4; FDOM: 0"
lunarcel02: status: normal
lunarcel02:
lunarcel02: name: FLASH_4_1
lunarcel02: diskType: FlashDisk
lunarcel02: luns: 4_1
lunarcel02: makeModel: "MARVELL SD88SA02"
lunarcel02: physicalFirmware: D20Y
lunarcel02: physicalInsertTime: 2012-08-11T18:21:43+08:00
lunarcel02: physicalSize: 22.8880615234375G
lunarcel02: slotNumber: "PCI Slot: 4; FDOM: 1"
lunarcel02: status: normal
lunarcel02:
lunarcel02: name: FLASH_4_2
lunarcel02: diskType: FlashDisk
lunarcel02: luns: 4_2
lunarcel02: makeModel: "MARVELL SD88SA02"
lunarcel02: physicalFirmware: D20Y
lunarcel02: physicalInsertTime: 2012-08-11T18:21:43+08:00
lunarcel02: physicalSize: 22.8880615234375G
lunarcel02: slotNumber: "PCI Slot: 4; FDOM: 2"
lunarcel02: status: normal
lunarcel02:
lunarcel02: name: FLASH_4_3
lunarcel02: diskType: FlashDisk
lunarcel02: luns: 4_3
lunarcel02: makeModel: "MARVELL SD88SA02"
lunarcel02: physicalFirmware: D20Y
lunarcel02: physicalInsertTime: 2012-08-11T18:21:43+08:00
lunarcel02: physicalSize: 22.8880615234375G
lunarcel02: slotNumber: "PCI Slot: 4; FDOM: 3"
lunarcel02: status: normal
lunarcel02:
lunarcel02: name: FLASH_5_0
lunarcel02: diskType: FlashDisk
lunarcel02: luns: 5_0
lunarcel02: makeModel: "MARVELL SD88SA02"
lunarcel02: physicalFirmware: D20Y
lunarcel02: physicalInsertTime: 2012-08-11T18:21:43+08:00
lunarcel02: physicalSize: 22.8880615234375G
lunarcel02: slotNumber: "PCI Slot: 5; FDOM: 0"
lunarcel02: status: normal
lunarcel02:
lunarcel02: name: FLASH_5_1
lunarcel02: diskType: FlashDisk
lunarcel02: luns: 5_1
lunarcel02: makeModel: "MARVELL SD88SA02"
lunarcel02: physicalFirmware: D20Y
lunarcel02: physicalInsertTime: 2012-08-11T18:21:43+08:00
lunarcel02: physicalSize: 22.8880615234375G
lunarcel02: slotNumber: "PCI Slot: 5; FDOM: 1"
lunarcel02: status: normal
lunarcel02:
lunarcel02: name: FLASH_5_2
lunarcel02: diskType: FlashDisk
lunarcel02: luns: 5_2
lunarcel02: makeModel: "MARVELL SD88SA02"
lunarcel02: physicalFirmware: D20Y

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lunarcel02: physicalInsertTime: 2012-08-11T18:21:43+08:00
lunarcel02: physicalSize: 22.8880615234375G
lunarcel02: slotNumber: "PCI Slot: 5; FDOM: 2"
lunarcel02: status: normal
lunarcel02:
lunarcel02: name: FLASH_5_3
lunarcel02: diskType: FlashDisk
lunarcel02: luns: 5_3
lunarcel02: makeModel: "MARVELL SD88SA02"
lunarcel02: physicalFirmware: D20Y
lunarcel02: physicalInsertTime: 2012-08-11T18:21:43+08:00
lunarcel02: physicalSize: 22.8880615234375G
lunarcel02: slotNumber: "PCI Slot: 5; FDOM: 3"
lunarcel02: status: normal
lunarcel03: name: 20:0
lunarcel03: deviceId: 19
lunarcel03: diskType: HardDisk
lunarcel03: enclosureDeviceId: 20
lunarcel03: errMediaCount: 0
lunarcel03: errOtherCount: 0
lunarcel03: foreignState: false
lunarcel03: luns: 0_0
lunarcel03: makeModel: "HITACHI H7230AS60SUN3.0T"
lunarcel03: physicalFirmware: A142
lunarcel03: physicalInsertTime: 2012-08-11T18:22:23+08:00
lunarcel03: physicalInterface: sata
lunarcel03: physicalSerial: RBT77G
lunarcel03: physicalSize: 2793.4719999991357G
lunarcel03: slotNumber: 0
lunarcel03: status: normal
lunarcel03:
lunarcel03: name: 20:1
lunarcel03: deviceId: 18
lunarcel03: diskType: HardDisk
lunarcel03: enclosureDeviceId: 20
lunarcel03: errMediaCount: 0
lunarcel03: errOtherCount: 0
lunarcel03: foreignState: false
lunarcel03: luns: 0_1
lunarcel03: makeModel: "HITACHI H7230AS60SUN3.0T"
lunarcel03: physicalFirmware: A142
lunarcel03: physicalInsertTime: 2012-08-11T18:22:25+08:00
lunarcel03: physicalInterface: sata
lunarcel03: physicalSerial: RD9Z0G
lunarcel03: physicalSize: 2793.4719999991357G
lunarcel03: slotNumber: 1
lunarcel03: status: normal
lunarcel03:
lunarcel03: name: 20:2
lunarcel03: deviceId: 17
lunarcel03: diskType: HardDisk
lunarcel03: enclosureDeviceId: 20
lunarcel03: errMediaCount: 0
lunarcel03: errOtherCount: 0
lunarcel03: foreignState: false
lunarcel03: luns: 0_2
lunarcel03: makeModel: "HITACHI H7230AS60SUN3.0T"
lunarcel03: physicalFirmware: A142
lunarcel03: physicalInsertTime: 2012-08-11T18:22:26+08:00
lunarcel03: physicalInterface: sata
lunarcel03: physicalSerial: RJLG2G
lunarcel03: physicalSize: 2793.4719999991357G
lunarcel03: slotNumber: 2

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lunarcel03: status:                normal
lunarcel03:
lunarcel03: name:                   20:3
lunarcel03: deviceId:               16
lunarcel03: diskType:               HardDisk
lunarcel03: enclosureDeviceId:      20
lunarcel03: errMediaCount:          0
lunarcel03: errOtherCount:          0
lunarcel03: foreignState:           false
lunarcel03: luns:                   0_3
lunarcel03: makeModel:               "HITACHI H7230AS60SUN3.0T"
lunarcel03: physicalFirmware:        A142
lunarcel03: physicalInsertTime:      2012-08-11T18:22:28+08:00
lunarcel03: physicalInterface:      sata
lunarcel03: physicalSerial:          RJUESG
lunarcel03: physicalSize:            2793.4719999991357G
lunarcel03: slotNumber:              3
lunarcel03: status:                normal
lunarcel03:
lunarcel03: name:                   20:4
lunarcel03: deviceId:               15
lunarcel03: diskType:               HardDisk
lunarcel03: enclosureDeviceId:      20
lunarcel03: errMediaCount:          0
lunarcel03: errOtherCount:          0
lunarcel03: foreignState:           false
lunarcel03: luns:                   0_4
lunarcel03: makeModel:               "HITACHI H7230AS60SUN3.0T"
lunarcel03: physicalFirmware:        A142
lunarcel03: physicalInsertTime:      2012-08-11T18:22:30+08:00
lunarcel03: physicalInterface:      sata
lunarcel03: physicalSerial:          R866EG
lunarcel03: physicalSize:            2793.4719999991357G
lunarcel03: slotNumber:              4
lunarcel03: status:                normal
lunarcel03:
lunarcel03: name:                   20:5
lunarcel03: deviceId:               14
lunarcel03: diskType:               HardDisk
lunarcel03: enclosureDeviceId:      20
lunarcel03: errMediaCount:          0
lunarcel03: errOtherCount:          0
lunarcel03: foreignState:           false
lunarcel03: luns:                   0_5
lunarcel03: makeModel:               "HITACHI H7230AS60SUN3.0T"
lunarcel03: physicalFirmware:        A142
lunarcel03: physicalInsertTime:      2012-08-11T18:22:31+08:00
lunarcel03: physicalInterface:      sata
lunarcel03: physicalSerial:          RJME8G
lunarcel03: physicalSize:            2793.4719999991357G
lunarcel03: slotNumber:              5
lunarcel03: status:                normal
lunarcel03:
lunarcel03: name:                   20:6
lunarcel03: deviceId:               13
lunarcel03: diskType:               HardDisk
lunarcel03: enclosureDeviceId:      20
lunarcel03: errMediaCount:          0
lunarcel03: errOtherCount:          0
lunarcel03: foreignState:           false
lunarcel03: luns:                   0_6
lunarcel03: makeModel:               "HITACHI H7230AS60SUN3.0T"
lunarcel03: physicalFirmware:        A142

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lunarcel03: physicalInsertTime: 2012-08-11T18:22:33+08:00
lunarcel03: physicalInterface: sata
lunarcel03: physicalSerial: RJ305G
lunarcel03: physicalSize: 2793.4719999991357G
lunarcel03: slotNumber: 6
lunarcel03: status: normal
lunarcel03:
lunarcel03: name: 20:7
lunarcel03: deviceId: 12
lunarcel03: diskType: HardDisk
lunarcel03: enclosureDeviceId: 20
lunarcel03: errMediaCount: 0
lunarcel03: errOtherCount: 0
lunarcel03: foreignState: false
lunarcel03: luns: 0_7
lunarcel03: makeModel: "HITACHI H7230AS60SUN3.0T"
lunarcel03: physicalFirmware: A142
lunarcel03: physicalInsertTime: 2012-08-11T18:22:35+08:00
lunarcel03: physicalInterface: sata
lunarcel03: physicalSerial: RGZ5UG
lunarcel03: physicalSize: 2793.4719999991357G
lunarcel03: slotNumber: 7
lunarcel03: status: normal
lunarcel03:
lunarcel03: name: 20:8
lunarcel03: deviceId: 11
lunarcel03: diskType: HardDisk
lunarcel03: enclosureDeviceId: 20
lunarcel03: errMediaCount: 0
lunarcel03: errOtherCount: 0
lunarcel03: foreignState: false
lunarcel03: luns: 0_8
lunarcel03: makeModel: "HITACHI H7230AS60SUN3.0T"
lunarcel03: physicalFirmware: A142
lunarcel03: physicalInsertTime: 2012-08-11T18:22:36+08:00
lunarcel03: physicalInterface: sata
lunarcel03: physicalSerial: RJ7A4G
lunarcel03: physicalSize: 2793.4719999991357G
lunarcel03: slotNumber: 8
lunarcel03: status: normal
lunarcel03:
lunarcel03: name: 20:9
lunarcel03: deviceId: 10
lunarcel03: diskType: HardDisk
lunarcel03: enclosureDeviceId: 20
lunarcel03: errMediaCount: 0
lunarcel03: errOtherCount: 0
lunarcel03: foreignState: false
lunarcel03: luns: 0_9
lunarcel03: makeModel: "HITACHI H7230AS60SUN3.0T"
lunarcel03: physicalFirmware: A142
lunarcel03: physicalInsertTime: 2012-08-11T18:22:38+08:00
lunarcel03: physicalInterface: sata
lunarcel03: physicalSerial: RBT7XG
lunarcel03: physicalSize: 2793.4719999991357G
lunarcel03: slotNumber: 9
lunarcel03: status: normal
lunarcel03:
lunarcel03: name: 20:10
lunarcel03: deviceId: 9
lunarcel03: diskType: HardDisk
lunarcel03: enclosureDeviceId: 20
lunarcel03: errMediaCount: 0

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lunarcel03: errOtherCount:      0
lunarcel03: foreignState:      false
lunarcel03: luns:               0_10
lunarcel03: makeModel:         "HITACHI H7230AS60SUN3.0T"
lunarcel03: physicalFirmware:   A142
lunarcel03: physicalInsertTime: 2012-08-11T18:22:40+08:00
lunarcel03: physicalInterface: sata
lunarcel03: physicalSerial:     RGXTRG
lunarcel03: physicalSize:       2793.4719999991357G
lunarcel03: slotNumber:        10
lunarcel03: status:            normal
lunarcel03:
lunarcel03: name:              20:11
lunarcel03: deviceId:          8
lunarcel03: diskType:          HardDisk
lunarcel03: enclosureDeviceId: 20
lunarcel03: errMediaCount:     0
lunarcel03: errOtherCount:     0
lunarcel03: foreignState:      false
lunarcel03: luns:              0_11
lunarcel03: makeModel:         "HITACHI H7230AS60SUN3.0T"
lunarcel03: physicalFirmware:   A142
lunarcel03: physicalInsertTime: 2012-08-11T18:22:42+08:00
lunarcel03: physicalInterface: sata
lunarcel03: physicalSerial:     RGXS3G
lunarcel03: physicalSize:       2793.4719999991357G
lunarcel03: slotNumber:        11
lunarcel03: status:            normal
lunarcel03:
lunarcel03: name:              FLASH_1_0
lunarcel03: diskType:          FlashDisk
lunarcel03: luns:              1_0
lunarcel03: makeModel:         "MARVELL SD88SA02"
lunarcel03: physicalFirmware:   D20Y
lunarcel03: physicalInsertTime: 2012-08-11T18:22:42+08:00
lunarcel03: physicalSize:       22.8880615234375G
lunarcel03: slotNumber:        "PCI Slot: 1; FDOM: 0"
lunarcel03: status:            normal
lunarcel03:
lunarcel03: name:              FLASH_1_1
lunarcel03: diskType:          FlashDisk
lunarcel03: luns:              1_1
lunarcel03: makeModel:         "MARVELL SD88SA02"
lunarcel03: physicalFirmware:   D20Y
lunarcel03: physicalInsertTime: 2012-08-11T18:22:42+08:00
lunarcel03: physicalSize:       22.8880615234375G
lunarcel03: slotNumber:        "PCI Slot: 1; FDOM: 1"
lunarcel03: status:            normal
lunarcel03:
lunarcel03: name:              FLASH_1_2
lunarcel03: diskType:          FlashDisk
lunarcel03: luns:              1_2
lunarcel03: makeModel:         "MARVELL SD88SA02"
lunarcel03: physicalFirmware:   D20Y
lunarcel03: physicalInsertTime: 2012-08-11T18:22:42+08:00
lunarcel03: physicalSize:       22.8880615234375G
lunarcel03: slotNumber:        "PCI Slot: 1; FDOM: 2"
lunarcel03: status:            normal
lunarcel03:
lunarcel03: name:              FLASH_1_3
lunarcel03: diskType:          FlashDisk
lunarcel03: luns:              1_3
lunarcel03: makeModel:         "MARVELL SD88SA02"

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lunarcel03: physicalFirmware:      D20Y
lunarcel03: physicalInsertTime:    2012-08-11T18:22:42+08:00
lunarcel03: physicalSize:          22.8880615234375G
lunarcel03: slotNumber:            "PCI Slot: 1; FDOM: 3"
lunarcel03: status:                normal
lunarcel03:
lunarcel03: name:                   FLASH_2_0
lunarcel03: diskType:               FlashDisk
lunarcel03: luns:                   2_0
lunarcel03: makeModel:              "MARVELL SD88SA02"
lunarcel03: physicalFirmware:      D20Y
lunarcel03: physicalInsertTime:    2012-08-11T18:22:42+08:00
lunarcel03: physicalSize:          22.8880615234375G
lunarcel03: slotNumber:            "PCI Slot: 2; FDOM: 0"
lunarcel03: status:                normal
lunarcel03:
lunarcel03: name:                   FLASH_2_1
lunarcel03: diskType:               FlashDisk
lunarcel03: luns:                   2_1
lunarcel03: makeModel:              "MARVELL SD88SA02"
lunarcel03: physicalFirmware:      D20Y
lunarcel03: physicalInsertTime:    2012-08-11T18:22:42+08:00
lunarcel03: physicalSize:          22.8880615234375G
lunarcel03: slotNumber:            "PCI Slot: 2; FDOM: 1"
lunarcel03: status:                normal
lunarcel03:
lunarcel03: name:                   FLASH_2_2
lunarcel03: diskType:               FlashDisk
lunarcel03: luns:                   2_2
lunarcel03: makeModel:              "MARVELL SD88SA02"
lunarcel03: physicalFirmware:      D20Y
lunarcel03: physicalInsertTime:    2012-08-11T18:22:42+08:00
lunarcel03: physicalSize:          22.8880615234375G
lunarcel03: slotNumber:            "PCI Slot: 2; FDOM: 2"
lunarcel03: status:                normal
lunarcel03:
lunarcel03: name:                   FLASH_2_3
lunarcel03: diskType:               FlashDisk
lunarcel03: luns:                   2_3
lunarcel03: makeModel:              "MARVELL SD88SA02"
lunarcel03: physicalFirmware:      D20Y
lunarcel03: physicalInsertTime:    2012-08-11T18:22:42+08:00
lunarcel03: physicalSize:          22.8880615234375G
lunarcel03: slotNumber:            "PCI Slot: 2; FDOM: 3"
lunarcel03: status:                normal
lunarcel03:
lunarcel03: name:                   FLASH_4_0
lunarcel03: diskType:               FlashDisk
lunarcel03: luns:                   4_0
lunarcel03: makeModel:              "MARVELL SD88SA02"
lunarcel03: physicalFirmware:      D20Y
lunarcel03: physicalInsertTime:    2012-08-11T18:22:42+08:00
lunarcel03: physicalSize:          22.8880615234375G
lunarcel03: slotNumber:            "PCI Slot: 4; FDOM: 0"
lunarcel03: status:                normal
lunarcel03:
lunarcel03: name:                   FLASH_4_1
lunarcel03: diskType:               FlashDisk
lunarcel03: luns:                   4_1
lunarcel03: makeModel:              "MARVELL SD88SA02"
lunarcel03: physicalFirmware:      D20Y
lunarcel03: physicalInsertTime:    2012-08-11T18:22:42+08:00
lunarcel03: physicalSize:          22.8880615234375G

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lunarcel03: slotNumber:	"PCI Slot: 4; FDOM: 1"
lunarcel03: status:	normal
lunarcel03:	
lunarcel03: name:	FLASH_4_2
lunarcel03: diskType:	FlashDisk
lunarcel03: luns:	4_2
lunarcel03: makeModel:	"MARVELL SD88SA02"
lunarcel03: physicalFirmware:	D20Y
lunarcel03: physicalInsertTime:	2012-08-11T18:22:42+08:00
lunarcel03: physicalSize:	22.8880615234375G
lunarcel03: slotNumber:	"PCI Slot: 4; FDOM: 2"
lunarcel03: status:	normal
lunarcel03:	
lunarcel03: name:	FLASH_4_3
lunarcel03: diskType:	FlashDisk
lunarcel03: luns:	4_3
lunarcel03: makeModel:	"MARVELL SD88SA02"
lunarcel03: physicalFirmware:	D20Y
lunarcel03: physicalInsertTime:	2012-08-11T18:22:42+08:00
lunarcel03: physicalSize:	22.8880615234375G
lunarcel03: slotNumber:	"PCI Slot: 4; FDOM: 3"
lunarcel03: status:	normal
lunarcel03:	
lunarcel03: name:	FLASH_5_0
lunarcel03: diskType:	FlashDisk
lunarcel03: luns:	5_0
lunarcel03: makeModel:	"MARVELL SD88SA02"
lunarcel03: physicalFirmware:	D20Y
lunarcel03: physicalInsertTime:	2012-08-11T18:22:42+08:00
lunarcel03: physicalSize:	22.8880615234375G
lunarcel03: slotNumber:	"PCI Slot: 5; FDOM: 0"
lunarcel03: status:	normal
lunarcel03:	
lunarcel03: name:	FLASH_5_1
lunarcel03: diskType:	FlashDisk
lunarcel03: luns:	5_1
lunarcel03: makeModel:	"MARVELL SD88SA02"
lunarcel03: physicalFirmware:	D20Y
lunarcel03: physicalInsertTime:	2012-08-11T18:22:42+08:00
lunarcel03: physicalSize:	22.8880615234375G
lunarcel03: slotNumber:	"PCI Slot: 5; FDOM: 1"
lunarcel03: status:	normal
lunarcel03:	
lunarcel03: name:	FLASH_5_2
lunarcel03: diskType:	FlashDisk
lunarcel03: luns:	5_2
lunarcel03: makeModel:	"MARVELL SD88SA02"
lunarcel03: physicalFirmware:	D20Y
lunarcel03: physicalInsertTime:	2012-08-11T18:22:42+08:00
lunarcel03: physicalSize:	22.8880615234375G
lunarcel03: slotNumber:	"PCI Slot: 5; FDOM: 2"
lunarcel03: status:	normal
lunarcel03:	
lunarcel03: name:	FLASH_5_3
lunarcel03: diskType:	FlashDisk
lunarcel03: luns:	5_3
lunarcel03: makeModel:	"MARVELL SD88SA02"
lunarcel03: physicalFirmware:	D20Y
lunarcel03: physicalInsertTime:	2012-08-11T18:22:42+08:00
lunarcel03: physicalSize:	22.8880615234375G
lunarcel03: slotNumber:	"PCI Slot: 5; FDOM: 3"
lunarcel03: status:	normal

在11.2.3.1.1版本下,如果闪盘firmware版本为D20Y,在更换闪盘过程中会触发bug 14617604, 因此建议安装补丁[Patch 14793859](#)升级闪盘firmware至D21Y

EX9	Sun Fire X4270 M2 storage servers (for Exadata X2-2, X2-8, and SPARC SuperCluster systems) Sun Fire X4275 storage servers (for Exadata V2 systems)	Unpublished Bug 14617604 – Recent replacement Aura 1.x flash DOMs in Exadata Database Machine X2 and V2 and SPARC SuperCluster T4-4 storage servers may prematurely fail if using firmware version D20Y or earlier. See Document 1504776.1 for details.	Fixed in Exadata Storage Server 11.2.3.2.1. Apply Patch 14793859 to 11.2.3.2.0 and earlier on qualified systems. Note that this patch contains firmware update flash DOM D21Y and ILOM 3.0.16.10.d for qualified systems. See Document 1504776.1 for details.
-----	--	---	--

5.10 验证CELL节点与Infiniband交换机连接性

```
# for ib_cable in `ls /sys/class/net | grep ^ib`; do printf "$ib_cable: "; cat /sys/class/net/$ib_cable/carrier; done
ib0: 1
ib1: 1
```

检查结果： 正常

```
[root@lunardb01 oracle]# dcli -g cell_group -l root ibstat
lunarccl01: CA 'mlx4_0'
lunarccl01: CA type: MT26428
lunarccl01: Number of ports: 2
lunarccl01: Firmware version: 2.7.8130
lunarccl01: Hardware version: b0
lunarccl01: Node GUID: 0x0021280001effb14
lunarccl01: System image GUID: 0x0021280001effb17
lunarccl01: Port 1:
lunarccl01: State: Active
lunarccl01: Physical state: LinkUp
lunarccl01: Rate: 40
lunarccl01: Base lid: 13
lunarccl01: LMC: 0
lunarccl01: SM lid: 2
lunarccl01: Capability mask: 0x02510868
lunarccl01: Port GUID: 0x0021280001effb15
lunarccl01: Port 2:
lunarccl01: State: Active
lunarccl01: Physical state: LinkUp
lunarccl01: Rate: 40
lunarccl01: Base lid: 14
lunarccl01: LMC: 0
lunarccl01: SM lid: 2
lunarccl01: Capability mask: 0x02510868
lunarccl01: Port GUID: 0x0021280001effb16
lunarccl02: CA 'mlx4_0'
lunarccl02: CA type: MT26428
lunarccl02: Number of ports: 2
lunarccl02: Firmware version: 2.7.8130
```

```

lunarcel02: Hardware version: b0
lunarcel02: Node GUID: 0x0021280001efe370
lunarcel02: System image GUID: 0x0021280001efe373
lunarcel02: Port 1:
lunarcel02: State: Active
lunarcel02: Physical state: LinkUp
lunarcel02: Rate: 40
lunarcel02: Base lid: 5
lunarcel02: LMC: 0
lunarcel02: SM lid: 2
lunarcel02: Capability mask: 0x02510868
lunarcel02: Port GUID: 0x0021280001efe371
lunarcel02: Port 2:
lunarcel02: State: Active
lunarcel02: Physical state: LinkUp
lunarcel02: Rate: 40
lunarcel02: Base lid: 6
lunarcel02: LMC: 0
lunarcel02: SM lid: 2
lunarcel02: Capability mask: 0x02510868
lunarcel02: Port GUID: 0x0021280001efe372
lunarcel03: CA 'mlx4_0'
lunarcel03: CA type: MT26428
lunarcel03: Number of ports: 2
lunarcel03: Firmware version: 2.7.8130
lunarcel03: Hardware version: b0
lunarcel03: Node GUID: 0x0021280001f006b0
lunarcel03: System image GUID: 0x0021280001f006b3
lunarcel03: Port 1:
lunarcel03: State: Active
lunarcel03: Physical state: LinkUp
lunarcel03: Rate: 40
lunarcel03: Base lid: 3
lunarcel03: LMC: 0
lunarcel03: SM lid: 2
lunarcel03: Capability mask: 0x02510868
lunarcel03: Port GUID: 0x0021280001f006b1
lunarcel03: Port 2:
lunarcel03: State: Active
lunarcel03: Physical state: LinkUp
lunarcel03: Rate: 40
lunarcel03: Base lid: 4
lunarcel03: LMC: 0
lunarcel03: SM lid: 2
lunarcel03: Capability mask: 0x02510868
lunarcel03: Port GUID: 0x0021280001f006b2

```

检查结果： 正常

```

[root@lunardb01 oracle]# dcli -g cell_group -l root ibstatus
lunarcel01: Infiniband device 'mlx4_0' port 1 status:
lunarcel01: default gid:   fe80:0000:0000:0000:0021:2800:01ef:fb15
lunarcel01: base lid:      0xd
lunarcel01: sm lid:                0x2
lunarcel01: state:                4: ACTIVE
lunarcel01: phys state:    5: LinkUp
lunarcel01: rate:                40 Gb/sec (4X QDR)
lunarcel01:
lunarcel01: Infiniband device 'mlx4_0' port 2 status:
lunarcel01: default gid:   fe80:0000:0000:0000:0021:2800:01ef:fb16
lunarcel01: base lid:      0xe
lunarcel01: sm lid:                0x2

```

```

lunarcel01: state: 4: ACTIVE
lunarcel01: phys state: 5: LinkUp
lunarcel01: rate: 40 Gb/sec (4X QDR)
lunarcel01:
lunarcel02: Infiniband device 'mlx4_0' port 1 status:
lunarcel02: default gid: fe80:0000:0000:0000:0021:2800:01ef:e371
lunarcel02: base lid: 0x5
lunarcel02: sm lid: 0x2
lunarcel02: state: 4: ACTIVE
lunarcel02: phys state: 5: LinkUp
lunarcel02: rate: 40 Gb/sec (4X QDR)
lunarcel02:
lunarcel02: Infiniband device 'mlx4_0' port 2 status:
lunarcel02: default gid: fe80:0000:0000:0000:0021:2800:01ef:e372
lunarcel02: base lid: 0x6
lunarcel02: sm lid: 0x2
lunarcel02: state: 4: ACTIVE
lunarcel02: phys state: 5: LinkUp
lunarcel02: rate: 40 Gb/sec (4X QDR)
lunarcel02:
lunarcel03: Infiniband device 'mlx4_0' port 1 status:
lunarcel03: default gid: fe80:0000:0000:0000:0021:2800:01f0:06b1
lunarcel03: base lid: 0x3
lunarcel03: sm lid: 0x2
lunarcel03: state: 4: ACTIVE
lunarcel03: phys state: 5: LinkUp
lunarcel03: rate: 40 Gb/sec (4X QDR)
lunarcel03:
lunarcel03: Infiniband device 'mlx4_0' port 2 status:
lunarcel03: default gid: fe80:0000:0000:0000:0021:2800:01f0:06b2
lunarcel03: base lid: 0x4
lunarcel03: sm lid: 0x2
lunarcel03: state: 4: ACTIVE
lunarcel03: phys state: 5: LinkUp
lunarcel03: rate: 40 Gb/sec (4X QDR)
lunarcel03:

```

检查结果：正常

5.11 检查第二代PCI桥配置

```

[root@lunardb01 ~]# ssh lunarcel01
Last login: Wed Feb  6 12:24:44 2013 from lunardb02.bmcc.com.cn
[root@lunarcel01 ~]# for BUS_NUM in 19:0.0 27:0.0; do echo $BUS_NUM `lspci -xxx -
s $BUS_NUM | grep ^50 | cut -d" " -f4`; done
19:0.0 82
27:0.0 82
[root@lunarcel01 ~]# ssh lunarcel02
Last login: Wed Feb  6 09:41:51 2013 from lunarcel01.bmcc.com.cn
[root@lunarcel02 ~]# for BUS_NUM in 19:0.0 27:0.0; do echo $BUS_NUM `lspci -xxx -
s $BUS_NUM | grep ^50 | cut -d" " -f4`; done
19:0.0 82
27:0.0 82
[root@lunarcel02 ~]# ssh lunarcel03
Last login: Wed Feb  6 09:42:11 2013 from lunarcel02.bmcc.com.cn
[root@lunarcel03 ~]# for BUS_NUM in 19:0.0 27:0.0; do echo $BUS_NUM `lspci -xxx -
s $BUS_NUM | grep ^50 | cut -d" " -f4`; done
19:0.0 82
27:0.0 82

```

检查结果：正常

5.12 NTP检查



5.13 检查Griddisk状态

VERIFY GRIDDISK ASM STATUS

```
[root@lunardb01 oracle]# dcli -g cell_group -l root "cellcli -e list griddisk attributes name,status,asmmodestatus,asmdeactivationoutcome"
lunarcel01: DATA_DM03_CD_00_lunarcel01      active ONLINE Yes
lunarcel01: DATA_DM03_CD_01_lunarcel01      active ONLINE Yes
lunarcel01: DATA_DM03_CD_02_lunarcel01      active ONLINE Yes
lunarcel01: DATA_DM03_CD_03_lunarcel01      active ONLINE Yes
lunarcel01: DATA_DM03_CD_04_lunarcel01      active ONLINE Yes
lunarcel01: DATA_DM03_CD_05_lunarcel01      active ONLINE Yes
lunarcel01: DATA_DM03_CD_06_lunarcel01      active ONLINE Yes
lunarcel01: DATA_DM03_CD_07_lunarcel01      active ONLINE Yes
lunarcel01: DATA_DM03_CD_08_lunarcel01      active ONLINE Yes
lunarcel01: DATA_DM03_CD_09_lunarcel01      active ONLINE Yes
lunarcel01: DATA_DM03_CD_10_lunarcel01      active ONLINE Yes
lunarcel01: DATA_DM03_CD_11_lunarcel01      active ONLINE Yes
lunarcel01: DBFS_DG_CD_02_lunarcel01         active ONLINE Yes
lunarcel01: DBFS_DG_CD_03_lunarcel01         active ONLINE Yes
lunarcel01: DBFS_DG_CD_04_lunarcel01         active ONLINE Yes
lunarcel01: DBFS_DG_CD_05_lunarcel01         active ONLINE Yes
lunarcel01: DBFS_DG_CD_06_lunarcel01         active ONLINE Yes
lunarcel01: DBFS_DG_CD_07_lunarcel01         active ONLINE Yes
lunarcel01: DBFS_DG_CD_08_lunarcel01         active ONLINE Yes
lunarcel01: DBFS_DG_CD_09_lunarcel01         active ONLINE Yes
lunarcel01: DBFS_DG_CD_10_lunarcel01         active ONLINE Yes
lunarcel01: DBFS_DG_CD_11_lunarcel01         active ONLINE Yes
lunarcel01: RECO_DM03_CD_00_lunarcel01       active ONLINE Yes
lunarcel01: RECO_DM03_CD_01_lunarcel01       active ONLINE Yes
lunarcel01: RECO_DM03_CD_02_lunarcel01       active ONLINE Yes
lunarcel01: RECO_DM03_CD_03_lunarcel01       active ONLINE Yes
lunarcel01: RECO_DM03_CD_04_lunarcel01       active ONLINE Yes
lunarcel01: RECO_DM03_CD_05_lunarcel01       active ONLINE Yes
lunarcel01: RECO_DM03_CD_06_lunarcel01       active ONLINE Yes
lunarcel01: RECO_DM03_CD_07_lunarcel01       active ONLINE Yes
lunarcel01: RECO_DM03_CD_08_lunarcel01       active ONLINE Yes
lunarcel01: RECO_DM03_CD_09_lunarcel01       active ONLINE Yes
lunarcel01: RECO_DM03_CD_10_lunarcel01       active ONLINE Yes
lunarcel01: RECO_DM03_CD_11_lunarcel01       active ONLINE Yes
lunarcel02: DATA_DM03_CD_00_lunarcel02      active ONLINE Yes
lunarcel02: DATA_DM03_CD_01_lunarcel02      active ONLINE Yes
lunarcel02: DATA_DM03_CD_02_lunarcel02      active ONLINE Yes
lunarcel02: DATA_DM03_CD_03_lunarcel02      active ONLINE Yes
lunarcel02: DATA_DM03_CD_04_lunarcel02      active ONLINE Yes
lunarcel02: DATA_DM03_CD_05_lunarcel02      active ONLINE Yes
lunarcel02: DATA_DM03_CD_06_lunarcel02      active ONLINE Yes
lunarcel02: DATA_DM03_CD_07_lunarcel02      active ONLINE Yes
lunarcel02: DATA_DM03_CD_08_lunarcel02      active ONLINE Yes
```

lunarcel02: DATA_DM03_CD_09_lunarcel02	active	ONLINE	Yes
lunarcel02: DATA_DM03_CD_10_lunarcel02	active	ONLINE	Yes
lunarcel02: DATA_DM03_CD_11_lunarcel02	active	ONLINE	Yes
lunarcel02: DBFS_DG_CD_02_lunarcel02	active	ONLINE	Yes
lunarcel02: DBFS_DG_CD_03_lunarcel02	active	ONLINE	Yes
lunarcel02: DBFS_DG_CD_04_lunarcel02	active	ONLINE	Yes
lunarcel02: DBFS_DG_CD_05_lunarcel02	active	ONLINE	Yes
lunarcel02: DBFS_DG_CD_06_lunarcel02	active	ONLINE	Yes
lunarcel02: DBFS_DG_CD_07_lunarcel02	active	ONLINE	Yes
lunarcel02: DBFS_DG_CD_08_lunarcel02	active	ONLINE	Yes
lunarcel02: DBFS_DG_CD_09_lunarcel02	active	ONLINE	Yes
lunarcel02: DBFS_DG_CD_10_lunarcel02	active	ONLINE	Yes
lunarcel02: DBFS_DG_CD_11_lunarcel02	active	ONLINE	Yes
lunarcel02: RECO_DM03_CD_00_lunarcel02	active	ONLINE	Yes
lunarcel02: RECO_DM03_CD_01_lunarcel02	active	ONLINE	Yes
lunarcel02: RECO_DM03_CD_02_lunarcel02	active	ONLINE	Yes
lunarcel02: RECO_DM03_CD_03_lunarcel02	active	ONLINE	Yes
lunarcel02: RECO_DM03_CD_04_lunarcel02	active	ONLINE	Yes
lunarcel02: RECO_DM03_CD_05_lunarcel02	active	ONLINE	Yes
lunarcel02: RECO_DM03_CD_06_lunarcel02	active	ONLINE	Yes
lunarcel02: RECO_DM03_CD_07_lunarcel02	active	ONLINE	Yes
lunarcel02: RECO_DM03_CD_08_lunarcel02	active	ONLINE	Yes
lunarcel02: RECO_DM03_CD_09_lunarcel02	active	ONLINE	Yes
lunarcel02: RECO_DM03_CD_10_lunarcel02	active	ONLINE	Yes
lunarcel02: RECO_DM03_CD_11_lunarcel02	active	ONLINE	Yes
lunarcel03: DATA_DM03_CD_00_lunarcel03	active	ONLINE	Yes
lunarcel03: DATA_DM03_CD_01_lunarcel03	active	ONLINE	Yes
lunarcel03: DATA_DM03_CD_02_lunarcel03	active	ONLINE	Yes
lunarcel03: DATA_DM03_CD_03_lunarcel03	active	ONLINE	Yes
lunarcel03: DATA_DM03_CD_04_lunarcel03	active	ONLINE	Yes
lunarcel03: DATA_DM03_CD_05_lunarcel03	active	ONLINE	Yes
lunarcel03: DATA_DM03_CD_06_lunarcel03	active	ONLINE	Yes
lunarcel03: DATA_DM03_CD_07_lunarcel03	active	ONLINE	Yes
lunarcel03: DATA_DM03_CD_08_lunarcel03	active	ONLINE	Yes
lunarcel03: DATA_DM03_CD_09_lunarcel03	active	ONLINE	Yes
lunarcel03: DATA_DM03_CD_10_lunarcel03	active	ONLINE	Yes
lunarcel03: DATA_DM03_CD_11_lunarcel03	active	ONLINE	Yes
lunarcel03: DBFS_DG_CD_02_lunarcel03	active	ONLINE	Yes
lunarcel03: DBFS_DG_CD_03_lunarcel03	active	ONLINE	Yes
lunarcel03: DBFS_DG_CD_04_lunarcel03	active	ONLINE	Yes
lunarcel03: DBFS_DG_CD_05_lunarcel03	active	ONLINE	Yes
lunarcel03: DBFS_DG_CD_06_lunarcel03	active	ONLINE	Yes
lunarcel03: DBFS_DG_CD_07_lunarcel03	active	ONLINE	Yes
lunarcel03: DBFS_DG_CD_08_lunarcel03	active	ONLINE	Yes
lunarcel03: DBFS_DG_CD_09_lunarcel03	active	ONLINE	Yes
lunarcel03: DBFS_DG_CD_10_lunarcel03	active	ONLINE	Yes
lunarcel03: DBFS_DG_CD_11_lunarcel03	active	ONLINE	Yes
lunarcel03: RECO_DM03_CD_00_lunarcel03	active	ONLINE	Yes
lunarcel03: RECO_DM03_CD_01_lunarcel03	active	ONLINE	Yes
lunarcel03: RECO_DM03_CD_02_lunarcel03	active	ONLINE	Yes
lunarcel03: RECO_DM03_CD_03_lunarcel03	active	ONLINE	Yes
lunarcel03: RECO_DM03_CD_04_lunarcel03	active	ONLINE	Yes
lunarcel03: RECO_DM03_CD_05_lunarcel03	active	ONLINE	Yes
lunarcel03: RECO_DM03_CD_06_lunarcel03	active	ONLINE	Yes
lunarcel03: RECO_DM03_CD_07_lunarcel03	active	ONLINE	Yes
lunarcel03: RECO_DM03_CD_08_lunarcel03	active	ONLINE	Yes
lunarcel03: RECO_DM03_CD_09_lunarcel03	active	ONLINE	Yes
lunarcel03: RECO_DM03_CD_10_lunarcel03	active	ONLINE	Yes
lunarcel03: RECO_DM03_CD_11_lunarcel03	active	ONLINE	Yes

检查结果：正常

5.14 检查Griddisk数量是否匹配

```
[root@lunardb01 ~]# for GD_PREFIX in `dcli -g cell_group -l root "cellcli -e list griddisk attributes name" | cut -d" " -f2 | gawk -F "_" '{print $1}' | sort -u`;
> do
> GD_PREFIX_RESULT=`dcli -g cell_group -l root "cellcli -e list griddisk where name like \'$GD_PREFIX\_.*\' | wc -l" | cut -d" " -f2 | sort -u | wc -l`;
> if [ $GD_PREFIX_RESULT = 1 ]
> then
> echo -e "$GD_PREFIX: SUCCESS"
> else
> echo -e "$GD_PREFIX: FAILURE"
> dcli -g cell_group -l root "cellcli -e list griddisk where name like \'$GD_PREFIX\_.*\' | wc -l";
> fi
> done
返回值:
DATA_DM03: SUCCESS
DBFS_DG: SUCCESS
RECO_DM03: SUCCESS
```

检查结果：正常

5.15 检查Celldisk状态

Verify celldisk configuration on disk drives

```
[root@lunardb01 oracle]# dcli -g cell_group -l root "cellcli -e list celldisk attributes
diskType, errorCount, size, status"
lunarcel01: HardDisk      0      2760.15625G    normal
lunarcel01: HardDisk      0      2760.15625G    normal
lunarcel01: HardDisk      0      2793.953125G    normal
lunarcel01: HardDisk      0      2793.953125G    normal
lunarcel01: HardDisk      0      2793.953125G    normal
lunarcel01: HardDisk      0      2793.953125G    normal
lunarcel01: HardDisk      0      2793.953125G    normal
lunarcel01: HardDisk      0      2793.953125G    normal
lunarcel01: HardDisk      0      2793.953125G    normal
lunarcel01: HardDisk      0      2793.953125G    normal
lunarcel01: HardDisk      0      2793.953125G    normal
lunarcel01: HardDisk      0      2793.953125G    normal
lunarcel01: HardDisk      0      2793.953125G    normal
lunarcel01: FlashDisk     0       22.875G       normal
lunarcel01: FlashDisk     0       22.875G       normal
lunarcel01: FlashDisk     0       22.875G       normal
lunarcel01: FlashDisk     0       22.875G       normal
lunarcel01: FlashDisk     0       22.875G       normal
lunarcel01: FlashDisk     0       22.875G       normal
lunarcel01: FlashDisk     0       22.875G       normal
lunarcel01: FlashDisk     0       22.875G       normal
lunarcel01: FlashDisk     0       22.875G       normal
lunarcel01: FlashDisk     0       22.875G       normal
lunarcel01: FlashDisk     0       22.875G       normal
lunarcel01: FlashDisk     0       22.875G       normal
lunarcel01: FlashDisk     0       22.875G       normal
lunarcel01: FlashDisk     0       22.875G       normal
lunarcel01: FlashDisk     0       22.875G       normal
lunarcel01: FlashDisk     0       22.875G       normal
lunarcel01: FlashDisk     0       22.875G       normal
lunarcel01: FlashDisk     0       22.875G       normal
lunarcel01: FlashDisk     0       22.875G       normal
lunarcel01: FlashDisk     0       22.875G       normal
```

[illegible]

检查结果：正常

5.16 检查Smart Flash Log状态

Verify Exadata Smart Flash Log

```
[root@lunardb01 oracle]# dcli -g cell_group -l root "cellcli -e list flashlog attributes
size, effectiveSize, efficiency, status"
lunarcel01: 512M 512M 100.0 normal
lunarcel02: 512M 512M 100.0 normal
lunarcel03: 512M 512M 100.0 normal
```

检查结果：正常

5.17 检查Smart FlashCache状态

```
[root@lunardb01 oracle]# dcli -g cell_group -l root "cellcli -e list flashcache attributes
degradedCellDisks, effectiveCacheSize, size, status"
lunarcel01: 364.75G 364.75G normal
lunarcel02: 364.75G 364.75G normal
lunarcel03: 364.75G 364.75G normal
```

检查结果：正常

5.18 cell storage server软件运行日志检查

```
[root@lunardb01 oracle]# dcli -g cell_group -l root "cellcli -e list alerthistory"
lunarcel01: 5_1 2012-10-31T16:40:23+08:00 info "The disk controller battery is executing a learn
cycle and may temporarily enter WriteThrough Caching mode as part of the learn cycle. Disk write throughput might be
temporarily lower during this time. The flash drives are not affected. The battery learn cycle is a normal
maintenance activity that occurs quarterly and runs for approximately 1 to 12 hours. Note that many learn cycles do
not require entering WriteThrough caching mode. When the disk controller cache returns to the normal WriteBack
caching mode, an additional informational alert will be sent. Battery Serial Number : 4868 Battery Type :
iBBU08 Battery Temperature : 29 C Full Charge Capacity : 1362 mAh Relative Charge : 92 % Ambient
Temperature : unknown"
lunarcel01: 5_2 2012-10-31T16:40:26+08:00 clear "All disk drives are in WriteBack caching mode.
Battery Serial Number : 4868 Battery Type : iBBU08 Battery Temperature : 29 C Full Charge Capacity :
1362 mAh Relative Charge : 92 % Ambient Temperature : unknown"
lunarcel01: 6 2012-12-18T14:56:16+08:00 critical "ORA-07445: exception encountered: core dump
[memmove()+68] [11] [0x2B67000002CF] [] [] []"
lunarcel01: 7_1 2012-12-18T14:56:38+08:00 critical "A SQL PLAN quarantine has been added. As a result,
Smart Scan is disabled for SQL statements with the quarantined SQL plan. Quarantine id : 1 Quarantine
type : SQL PLAN Quarantine reason : Crash DB Unique Name : LUNAR Incident id : 1
SQLID : 2mpaghr539269 SQL Plan details : {SQL_PLAN_HASH_VALUE=2598223888, PLAN_LINE_ID=53} In
addition, the following disk region has been quarantined, and Smart Scan will be disabled for this region: Disk
Region : {Grid Disk Name=DATA_DM03_CD_09_lunarcel01, offset=40795897856, size=1M} "
lunarcel01: 8 2012-12-22T19:56:34+08:00 critical "ORA-07445: exception encountered: core dump
[lxndiv()+1154] [11] [0x000000000] [] [] []"
lunarcel01: 9_1 2012-12-22T19:57:20+08:00 critical "A SQL PLAN quarantine has been added. As a result,
Smart Scan is disabled for SQL statements with the quarantined SQL plan. Quarantine id : 3 Quarantine
type : SQL PLAN Quarantine reason : Crash DB Unique Name : LUNAR Incident id : 9
SQLID : d8q9kvqj6crnf SQL Plan details : {SQL_PLAN_HASH_VALUE=1752582555, PLAN_LINE_ID=26} In
addition, the following disk region has been quarantined, and Smart Scan will be disabled for this region: Disk
Region : {Grid Disk Name=DATA_DM03_CD_10_lunarcel01, offset=242552406016, size=1M} "
lunarcel01: 10 2012-12-30T12:56:19+08:00 critical "ORA-07445: exception encountered: core dump
[_wordcopy_fwd_dest_aligned()+213] [11] [0xFFFFF5D8FFFFF5D8] [] [] []"
lunarcel01: 11_1 2012-12-30T12:57:15+08:00 critical "A SQL PLAN quarantine has been added. As a result,
Smart Scan is disabled for SQL statements with the quarantined SQL plan. Quarantine id : 5 Quarantine
type : SQL PLAN Quarantine reason : Crash DB Unique Name : LUNAR Incident id : 17
SQLID : 453cf7hd3a7nz SQL Plan details : {SQL_PLAN_HASH_VALUE=2144497033, PLAN_LINE_ID=61} In
addition, the following disk region has been quarantined, and Smart Scan will be disabled for this region: Disk
Region : {Grid Disk Name=DATA_DM03_CD_08_lunarcel01, offset=37900779520, size=1M} "
lunarcel01: 12 2013-01-01T03:56:28+08:00 critical "ORA-07445: exception encountered: core dump
[_wordcopy_fwd_dest_aligned()+213] [11] [0x265000001F98] [] [] []"
lunarcel01: 13_1 2013-01-01T03:57:35+08:00 critical "A SQL PLAN quarantine has been added. As a result,
Smart Scan is disabled for SQL statements with the quarantined SQL plan. Quarantine id : 7 Quarantine
```

```

type : SQL PLAN Quarantine reason : Crash DB Unique Name : LUNAR Incident id : 25
SQLID : 6xw6brgua9ltn SQL Plan details : {SQL_PLAN_HASH_VALUE=2994263290, PLAN_LINE_ID=64} In
addition, the following disk region has been quarantined, and Smart Scan will be disabled for this region: Disk
Region : {Grid Disk Name=DATA_DM03_CD_00_lunarcel01, offset=161175568384, size=1M} "
lunarcel01: 14_1 2013-01-17T18:00:16+08:00 info "The disk controller battery is executing a learn
cycle and may temporarily enter WriteThrough Caching mode as part of the learn cycle. Disk write throughput might be
temporarily lower during this time. The flash drives are not affected. The battery learn cycle is a normal
maintenance activity that occurs quarterly and runs for approximately 1 to 12 hours. Note that many learn cycles do
not require entering WriteThrough caching mode. When the disk controller cache returns to the normal WriteBack
caching mode, an additional informational alert will be sent. Battery Serial Number : 4868 Battery Type :
iBBU08 Battery Temperature : 41 C Full Charge Capacity : 1369 mAh Relative Charge : 96 % Ambient
Temperature : 26 C"
lunarcel01: 14_2 2013-01-18T00:22:00+08:00 clear "All disk drives are in WriteBack caching mode.
Battery Serial Number : 4868 Battery Type : iBBU08 Battery Temperature : 45 C Full Charge Capacity :
1374 mAh Relative Charge : 71 % Ambient Temperature : 25 C"
lunarcel01: 15 2013-01-31T15:27:04+08:00 critical "ORA-07445: exception encountered: core dump
[evareo()+1857] [11] [0x000000000] [] [] []"
lunarcel01: 16_1 2013-01-31T15:27:52+08:00 critical "A SQL PLAN quarantine has been added. As a result,
Smart Scan is disabled for SQL statements with the quarantined SQL plan. Quarantine id : 9 Quarantine
type : SQL PLAN Quarantine reason : Crash DB Unique Name : LUNAR Incident id : 33
SQLID : 6fspr5xwmvx6x SQL Plan details : {SQL_PLAN_HASH_VALUE=848651098, PLAN_LINE_ID=2} In
addition, the following disk region has been quarantined, and Smart Scan will be disabled for this region: Disk
Region : {Grid Disk Name=DATA_DM03_CD_04_lunarcel01, offset=74423730176, size=1M} "
lunarcel02: 5_1 2012-10-31T16:39:06+08:00 info "The disk controller battery is executing a learn
cycle and may temporarily enter WriteThrough Caching mode as part of the learn cycle. Disk write throughput might be
temporarily lower during this time. The flash drives are not affected. The battery learn cycle is a normal
maintenance activity that occurs quarterly and runs for approximately 1 to 12 hours. Note that many learn cycles do
not require entering WriteThrough caching mode. When the disk controller cache returns to the normal WriteBack
caching mode, an additional informational alert will be sent. Battery Serial Number : 4894 Battery Type :
iBBU08 Battery Temperature : 28 C Full Charge Capacity : 1350 mAh Relative Charge : 93 % Ambient
Temperature : unknown"
lunarcel02: 5_2 2012-10-31T16:39:10+08:00 clear "All disk drives are in WriteBack caching mode.
Battery Serial Number : 4894 Battery Type : iBBU08 Battery Temperature : 28 C Full Charge Capacity :
1350 mAh Relative Charge : 93 % Ambient Temperature : unknown"
lunarcel02: 6 2012-12-18T14:56:28+08:00 critical "ORA-07445: exception encountered: core dump
[memmove()+68] [11] [0x2B67000002CF] [] [] []"
lunarcel02: 7_1 2012-12-18T14:57:18+08:00 critical "A SQL PLAN quarantine has been added. As a result,
Smart Scan is disabled for SQL statements with the quarantined SQL plan. Quarantine id : 1 Quarantine
type : SQL PLAN Quarantine reason : Crash DB Unique Name : LUNAR Incident id : 1
SQLID : 2mpaghr539269 SQL Plan details : {SQL_PLAN_HASH_VALUE=2598223888, PLAN_LINE_ID=53} In
addition, the following disk region has been quarantined, and Smart Scan will be disabled for this region: Disk
Region : {Grid Disk Name=DATA_DM03_CD_02_lunarcel02, offset=40904949760, size=1M} "
lunarcel02: 8_1 2013-01-17T18:01:01+08:00 info "The disk controller battery is executing a learn
cycle and may temporarily enter WriteThrough Caching mode as part of the learn cycle. Disk write throughput might be
temporarily lower during this time. The flash drives are not affected. The battery learn cycle is a normal
maintenance activity that occurs quarterly and runs for approximately 1 to 12 hours. Note that many learn cycles do
not require entering WriteThrough caching mode. When the disk controller cache returns to the normal WriteBack
caching mode, an additional informational alert will be sent. Battery Serial Number : 4894 Battery Type :
iBBU08 Battery Temperature : 40 C Full Charge Capacity : 1354 mAh Relative Charge : 99 % Ambient
Temperature : 26 C"
lunarcel02: 8_2 2013-01-18T00:37:44+08:00 clear "All disk drives are in WriteBack caching mode.
Battery Serial Number : 4894 Battery Type : iBBU08 Battery Temperature : 44 C Full Charge Capacity :
1352 mAh Relative Charge : 72 % Ambient Temperature : 25 C"
lunarcel02: 9 2013-01-31T17:09:08+08:00 critical "ORA-07445: exception encountered: core dump
[lnxadd()+475] [11] [0x000000000] [] [] []"
lunarcel02: 10_1 2013-01-31T17:09:51+08:00 critical "A SQL PLAN quarantine has been added. As a result,
Smart Scan is disabled for SQL statements with the quarantined SQL plan. Quarantine id : 3 Quarantine
type : SQL PLAN Quarantine reason : Crash DB Unique Name : LUNAR Incident id : 9
SQLID : 4bt79pw5vsg4a SQL Plan details : {SQL_PLAN_HASH_VALUE=848651098, PLAN_LINE_ID=2} In
addition, the following disk region has been quarantined, and Smart Scan will be disabled for this region: Disk
Region : {Grid Disk Name=DATA_DM03_CD_10_lunarcel02, offset=87792025600, size=1M} "
lunarcel03: 4_1 2012-10-31T16:37:50+08:00 info "The disk controller battery is executing a learn
cycle and may temporarily enter WriteThrough Caching mode as part of the learn cycle. Disk write throughput might be
temporarily lower during this time. The flash drives are not affected. The battery learn cycle is a normal
maintenance activity that occurs quarterly and runs for approximately 1 to 12 hours. Note that many learn cycles do
not require entering WriteThrough caching mode. When the disk controller cache returns to the normal WriteBack
caching mode, an additional informational alert will be sent. Battery Serial Number : 326 Battery Type :
iBBU08 Battery Temperature : 31 C Full Charge Capacity : 1347 mAh Relative Charge : 93 % Ambient
Temperature : unknown"

```

```

lunarcel03: 4_2 2012-10-31T16:37:54+08:00 clear "All disk drives are in WriteBack caching mode.
Battery Serial Number : 326 Battery Type : iBBU08 Battery Temperature : 31 C Full Charge Capacity :
1347 mAh Relative Charge : 93 % Ambient Temperature : unknown"
lunarcel03: 5 2012-12-22T19:56:24+08:00 critical "ORA-07445: exception encountered: core dump
[lnxdiv()+1154] [11] [0x000000000] [] [] []"
lunarcel03: 6_1 2012-12-22T19:57:07+08:00 critical "A SQL PLAN quarantine has been added. As a result,
Smart Scan is disabled for SQL statements with the quarantined SQL plan. Quarantine id : 1 Quarantine
type : SQL PLAN Quarantine reason : Crash DB Unique Name : LUNAR Incident id : 1
SQLID : d8q9kvqj6crnf SQL Plan details : {SQL_PLAN_HASH_VALUE=1752582555, PLAN_LINE_ID=26} In
addition, the following disk region has been quarantined, and Smart Scan will be disabled for this region: Disk
Region : {Grid Disk Name=DATA_DM03_CD_02_lunarcel03, offset=242665652224, size=1M} "
lunarcel03: 7 2012-12-30T12:56:28+08:00 critical "ORA-07445: exception encountered: core dump
[_wordcopy_fwd_dest_aligned()+213] [11] [0xFFFFF5D8FFFFF5D8] [] [] []"
lunarcel03: 8_1 2012-12-30T12:57:34+08:00 critical "A SQL PLAN quarantine has been added. As a result,
Smart Scan is disabled for SQL statements with the quarantined SQL plan. Quarantine id : 3 Quarantine
type : SQL PLAN Quarantine reason : Crash DB Unique Name : LUNAR Incident id : 9
SQLID : 453cf7hd3a7nz SQL Plan details : {SQL_PLAN_HASH_VALUE=2144497033, PLAN_LINE_ID=61} In
addition, the following disk region has been quarantined, and Smart Scan will be disabled for this region: Disk
Region : {Grid Disk Name=DATA_DM03_CD_03_lunarcel03, offset=39125516288, size=1M} "
lunarcel03: 9 2013-01-13T16:56:30+08:00 critical "ORA-07445: exception encountered: core dump
[_wordcopy_fwd_dest_aligned()+213] [11] [0x270F00002650] [] [] []"
lunarcel03: 10_1 2013-01-13T16:56:48+08:00 critical "A SQL PLAN quarantine has been added. As a result,
Smart Scan is disabled for SQL statements with the quarantined SQL plan. Quarantine id : 5 Quarantine
type : SQL PLAN Quarantine reason : Crash DB Unique Name : LUNAR Incident id : 17
SQLID : bvjzdyq7xnnpt SQL Plan details : {SQL_PLAN_HASH_VALUE=981775711, PLAN_LINE_ID=61} In
addition, the following disk region has been quarantined, and Smart Scan will be disabled for this region: Disk
Region : {Grid Disk Name=DATA_DM03_CD_01_lunarcel03, offset=161047642112, size=1M} "
lunarcel03: 11_1 2013-01-17T18:01:22+08:00 info "The disk controller battery is executing a learn
cycle and may temporarily enter WriteThrough Caching mode as part of the learn cycle. Disk write throughput might be
temporarily lower during this time. The flash drives are not affected. The battery learn cycle is a normal
maintenance activity that occurs quarterly and runs for approximately 1 to 12 hours. Note that many learn cycles do
not require entering WriteThrough caching mode. When the disk controller cache returns to the normal WriteBack
caching mode, an additional informational alert will be sent. Battery Serial Number : 326 Battery Type :
iBBU08 Battery Temperature : 41 C Full Charge Capacity : 1353 mAh Relative Charge : 89 % Ambient
Temperature : 25 C"
lunarcel03: 11_2 2013-01-18T00:19:45+08:00 clear "All disk drives are in WriteBack caching mode.
Battery Serial Number : 326 Battery Type : iBBU08 Battery Temperature : 45 C Full Charge Capacity :
1354 mAh Relative Charge : 72 % Ambient Temperature : 25 C"
lunarcel03: 12 2013-01-31T15:27:18+08:00 critical "ORA-07445: exception encountered: core dump
[evareo()+1857] [11] [0x000000000] [] [] []"
lunarcel03: 13_1 2013-01-31T15:28:08+08:00 critical "A SQL PLAN quarantine has been added. As a result,
Smart Scan is disabled for SQL statements with the quarantined SQL plan. Quarantine id : 7 Quarantine
type : SQL PLAN Quarantine reason : Crash DB Unique Name : LUNAR Incident id : 25
SQLID : 6fspr5xwmv6x SQL Plan details : {SQL_PLAN_HASH_VALUE=848651098, PLAN_LINE_ID=2} In
addition, the following disk region has been quarantined, and Smart Scan will be disabled for this region: Disk
Region : {Grid Disk Name=DATA_DM03_CD_10_lunarcel03, offset=74142711808, size=1M} "

```

未发现影响cell运行的错误信息。

5.19 操作系统日志文件检测

具体见sundiag.sh输出，发现操作系统系统在进行raid 1数据重新同步，其他操作系统日志正常

```

Feb 2 17:44:47 lunarcel01 auditd[7505]: Audit daemon rotating log files
Feb 3 04:22:01 lunarcel01 kernel: md: syncing RAID array md4
Feb 3 04:22:01 lunarcel01 kernel: md: minimum _guaranteed_ reconstruction speed: 1000 KB/sec/disc.
Feb 3 04:22:01 lunarcel01 kernel: md: using maximum available idle IO bandwidth (but not more than 50000
KB/sec) for reconstruction.
Feb 3 04:22:01 lunarcel01 kernel: md: delaying resync of md6 until md4 has finished resync (they share
one or more physical units)
Feb 3 04:22:01 lunarcel01 kernel: md: using 128k window, over a total of 120384 blocks.
Feb 3 04:22:01 lunarcel01 kernel: md: delaying resync of md7 until md4 has finished resync (they share
one or more physical units)
Feb 3 04:22:01 lunarcel01 kernel: md: delaying resync of md6 until md4 has finished resync (they share
one or more physical units)

```

```
Feb  3 04:22:01 lunarcel01 kernel: md: delaying resync of md2 until md4 has finished resync (they share
one or more physical units)
Feb  3 04:22:01 lunarcel01 kernel: md: delaying resync of md6 until md4 has finished resync (they share
one or more physical units)
Feb  3 04:22:01 lunarcel01 kernel: md: delaying resync of md7 until md4 has finished resync (they share
one or more physical units)
Feb  3 04:22:01 lunarcel01 kernel: md: delaying resync of md11 until md4 has finished resync (they share
one or more physical units)
Feb  3 04:22:01 lunarcel01 kernel: md: delaying resync of md6 until md4 has finished resync (they share
one or more physical units)
Feb  3 04:22:01 lunarcel01 kernel: md: delaying resync of md7 until md4 has finished resync (they share
one or more physical units)
Feb  3 04:22:01 lunarcel01 kernel: md: delaying resync of md2 until md4 has finished resync (they share
one or more physical units)
Feb  3 04:22:01 lunarcel01 kernel: md: delaying resync of md1 until md4 has finished resync (they share
one or more physical units)
Feb  3 04:22:01 lunarcel01 kernel: md: delaying resync of md6 until md4 has finished resync (they share
one or more physical units)
Feb  3 04:22:01 lunarcel01 kernel: md: delaying resync of md2 until md4 has finished resync (they share
one or more physical units)
Feb  3 04:22:01 lunarcel01 kernel: md: delaying resync of md7 until md4 has finished resync (they share
one or more physical units)
Feb  3 04:22:01 lunarcel01 kernel: md: delaying resync of md11 until md4 has finished resync (they share
one or more physical units)
Feb  3 04:22:01 lunarcel01 kernel: md: delaying resync of md8 until md4 has finished resync (they share
one or more physical units)
Feb  3 04:22:01 lunarcel01 kernel: md: delaying resync of md6 until md4 has finished resync (they share
one or more physical units)
Feb  3 04:22:01 lunarcel01 kernel: md: delaying resync of md11 until md4 has finished resync (they share
one or more physical units)
Feb  3 04:22:01 lunarcel01 kernel: md: delaying resync of md7 until md4 has finished resync (they share
one or more physical units)
Feb  3 04:22:01 lunarcel01 kernel: md: delaying resync of md2 until md4 has finished resync (they share
one or more physical units)
Feb  3 04:22:01 lunarcel01 kernel: md: delaying resync of md1 until md4 has finished resync (they share
one or more physical units)
Feb  3 04:22:18 lunarcel01 kernel: md: md4: sync done.
```

5.20 Exachk工具对CELL节点健康检查汇总

检测失败事项

Status	Type	Message	Status On	Details
FAIL	Storage Server Check	System is exposed to Exadata Critical Issue EX9	lunarcel03, lunarcel02	View
FAIL	Storage Server Check	One or more storage server has stateless alerts with null "examinedby" fields.	lunarcel03, lunarcel02	View
FAIL	Storage Server Check	Storage Server alerts are not configured to be sent via email	All Storage Servers	View

检测成功事项

Status	Type	Message	Status On	Details
PASS	Storage Server Check	Exadata software version is compatible with Oracle RDBMS software version	All Storage Servers	View
PASS	Storage Server Check	The celldisk configuration on flash memory devices matches Oracle best practices	lunarcel03	View
PASS	Storage Server Check	The griddisk count matches across all storage servers where a given prefix name exists	lunarcel03	View
PASS	Storage Server Check	The total number of griddisks with a given prefix name is evenly divisible by the number of celldisks	lunarcel03	View
PASS	Storage Server	The griddisk ASM status matches specification	lunarcel03	View

	Check			
PASS	Storage Server Check	The celldisk configuration on disk drives matches Oracle best practices	lunarcel03	View
PASS	Storage Server Check	The total size of all griddisks fully utilizes celldisk capacity	lunarcel03	View
PASS	Storage Server Check	DNS Server ping time is in acceptable range	All Storage Servers	View
PASS	Storage Server Check	Smart flash log is created on all storage server	All Storage Servers	View
PASS	Storage Server Check	Storage Server Flash Memory is configured as Exadata Smart Flash Cache	All Storage Servers	View
PASS	Storage Server Check	Peripheral component interconnect (PCI) bridge is configured for generation II on all storage servers	All Storage Servers	View
PASS	Storage Server Check	RAID controller battery condition is good on all storage servers	All Storage Servers	View
PASS	Storage Server Check	There are no griddisks configured on flash memory devices	All Storage Servers	View
PASS	Storage Server Check	No Storage Server conventional or flash disks have a performance problem	All Storage Servers	View
PASS	Storage Server Check	All InfiniBand network cables are connected on all Storage Servers	All Storage Servers	View
PASS	Storage Server Check	All Ethernet network cables are connected on all Storage Servers	All Storage Servers	View
PASS	Storage Server Check	Disk cache policy is set to Disabled on all storage server	All Storage Servers	View
PASS	Storage Server Check	Electronic Storage Module (ESM) Lifetime is within specification for all flash cards on all storage servers	All Storage Servers	View
PASS	Storage Server Check	Management network is separate from data network on all storage servers	All Storage Servers	View
PASS	Storage Server Check	Ambient temperature is within the recommended range	All Storage Servers	View
PASS	Storage Server Check	Software profile check is successful on all storage servers.	All Storage Servers	View
PASS	Storage Server Check	Hardware and firmware profile check is successful on all storage servers.	All Storage Servers	View
PASS	Storage Server Check	OSWatcher is running on all storage servers	All Storage Servers	View
PASS	Storage Server Check	RAID controller battery temperature is normal [Storage Server]	All Storage Servers	View
PASS	Storage Server Check	All Exadata storage server meet system model number requirement	All Storage Servers	View
PASS	Storage Server Check	All storage servers meet or exceed root(/) filesystem free space recommendation	All Storage Servers	View
PASS	Storage Server Check	All storage server disk controllers use writeback cache	All Storage Servers	View
PASS	Storage Server Check	No celldisks have status of predictive failure	All Storage Servers	View

PASS	Storage Server Check	RAID controller version matches on all storage servers	All Storage Servers	View
PASS	Storage Server Check	No Storage Server Memory (ECC) Errors found.	All Storage Servers	View

6. Infiniband检查

6.1 检查HCA端口配置

```
[root@lunardb01 oracle]# ibswitches
Switch : 0x002128f5719aa0a0 ports 36 "SUN DCS 36P QDR dm03sw-ib3.bmcc.com.cn" enhanced port 0 lid 1 lmc 0
Switch : 0x002128f571a3a0a0 ports 36 "SUN DCS 36P QDR dm03sw-ib2.bmcc.com.cn" enhanced port 0 lid 2 lmc 0
```

6.2 版本检查

```
# version
SUN DCS 36p version: 1.3.3-2
Build time: Apr 4 2011 11:15:19
SP board info:
Manufacturing Date: 2012.01.10
Serial Number: "NCD8F0123"
Hardware Revision: 0x0007
Firmware Revision: 0x0000
BIOS version: SUN0R100
BIOS date: 06/22/2010
```

6.3 验证软件配置

```
[root@lunardb01 oracle]# /opt/oracle.SupportTools/CheckSWProfile.sh -I
IS_SPINEDm03sw-ib3,dm03sw-ib2
Checking if switch dm03sw-ib3 is pingable...
Checking if switch dm03sw-ib2 is pingable...
Use the default password for all switches? (y/n) [n]: y
[INFO] SUCCESS Switch dm03sw-ib3 has correct software and firmware version:
SWVer: 1.3.3-2
[ERROR] OpenSM configurations mismatch for switch dm03sw-ib3
Found: controlled_handover=TRUE polling_retry_number=5
routing_engine=ftree sminfo_polling_timeout=1000 sm_priority=5
Recommended: controlled_handover=TRUE polling_retry_number=5
routing_engine=ftree sminfo_polling_timeout=1000 sm_priority=8

[INFO] SUCCESS Switch dm03sw-ib2 has correct software and firmware version:
SWVer: 1.3.3-2
[INFO] SUCCESS Switch dm03sw-ib2 has correct opensm configuration:
controlled_handover=TRUE polling_retry_number=5
routing_engine=ftree sminfo_polling_timeout=1000 sm_priority=5
```

针对quarter配置，两个Infiniband交换机sm_priority都应5

6.4 操作系统日志文件检查

```
# cd /var/log
$ more messages
```

未发现任何错误信息

6.5 Exachk工具对Infiniband Switch健康检查汇总

Infiniband Switch

Status	Type	Message	Status On	Details
 PASS	Switch Check	Infiniband switch firmware version is compatible with Exadata software version	All Infiniband Switches	View
 PASS	Switch Check	DNS Server ping time is in acceptable range	All Infiniband Switches	View
 PASS	Switch Check	Hostname is set in /etc/hosts	All Infiniband Switches	View
 PASS	Switch Check	Infiniband switch software version meets the recommendation	All Infiniband Switches	View
 PASS	Switch Check	polling_retry_number is set to recommended value of 5	All Infiniband Switches	View
 PASS	Switch Check	controlled_handover is set to recommended value of TRUE on infiniband switch dm03sw-ib2	All Infiniband Switches	View
 PASS	Switch Check	Subnet manager daemon is running	All Infiniband Switches	View
 PASS	Switch Check	log_flags is set to recommended value of 0x03	All Infiniband Switches	View
 PASS	Switch Check	sm_priority is set to recommended value	All Infiniband Switches	View
 PASS	Switch Check	routing_engine is set to recommended value of free	All Infiniband Switches	View
 PASS	Switch Check	sminfo_polling_timeout is set to recommended value of 1000	All Infiniband Switches	View
 PASS	Switch Check	NTP configuration has been changed from default	All Infiniband Switches	View
 PASS	Switch Check	HOSTNAME is set in /etc/sysconfig/network	All Infiniband Switches	View

经检查,Infiniband交换机运行正常。

7. CRS软件

7.1 grid用户Shell Limit检查

以下是在主机lunardb01上ORACLE软件安装用户Shell Limit:

```

root:
core file size          (blocks, -c) 0
data seg size           (kbytes, -d) unlimited
scheduling priority     (-e) 0
file size               (blocks, -f) unlimited
pending signals         (-i) 802816
max locked memory       (kbytes, -l) 32
max memory size         (kbytes, -m) unlimited
open files              (-n) 1024
pipe size               (512 bytes, -p) 8
POSIX message queues    (bytes, -q) 819200
real-time priority      (-r) 0
stack size              (kbytes, -s) 10240
cpu time                (seconds, -t) unlimited
max user processes      (-u) 802816
virtual memory          (kbytes, -v) unlimited
file locks              (-x) unlimited

grid
core file size          (blocks, -c) 0
data seg size           (kbytes, -d) unlimited
scheduling priority     (-e) 0
file size               (blocks, -f) unlimited
pending signals         (-i) 802816
max locked memory       (kbytes, -l) 74136141
max memory size         (kbytes, -m) unlimited
open files              (-n) 65536
pipe size               (512 bytes, -p) 8
POSIX message queues    (bytes, -q) 819200
real-time priority      (-r) 0
stack size              (kbytes, -s) 10240
cpu time                (seconds, -t) unlimited
max user processes      (-u) 131072
virtual memory          (kbytes, -v) unlimited
file locks              (-x) unlimited

```

以下是在主机lunardb02上ORACLE软件安装用户Shell Limit:

```

root:
core file size          (blocks, -c) 0
data seg size           (kbytes, -d) unlimited
scheduling priority     (-e) 0
file size               (blocks, -f) unlimited
pending signals         (-i) 802816
max locked memory       (kbytes, -l) 32
max memory size         (kbytes, -m) unlimited
open files              (-n) 1024
pipe size               (512 bytes, -p) 8
POSIX message queues    (bytes, -q) 819200
real-time priority      (-r) 0
stack size              (kbytes, -s) 10240
cpu time                (seconds, -t) unlimited
max user processes      (-u) 802816
virtual memory          (kbytes, -v) unlimited
file locks              (-x) unlimited

grid
core file size          (blocks, -c) 0
data seg size           (kbytes, -d) unlimited
scheduling priority     (-e) 0
file size               (blocks, -f) unlimited
pending signals         (-i) 802816

```

```

max locked memory      (kbytes, -l) 74136141
max memory size        (kbytes, -m) unlimited
open files              (-n) 65536
pipe size               (512 bytes, -p) 8
POSIX message queues   (bytes, -q) 819200
real-time priority     (-r) 0
stack size              (kbytes, -s) 10240
cpu time                (seconds, -t) unlimited
max user processes     (-u) 131072
virtual memory          (kbytes, -v) unlimited
file locks              (-x) unlimited

```

当前SHELL LIMIT配置满足。

7.2 Voting Disk配置和状态信息

##	STATE	File Universal Id	File Name	Disk group
1.	ONLINE	711288d037944f73bf265277e7457406	(o/192.168.10.3/DBFS_DG_CD_02_lunarcel01)	[DBFS_DG]
2.	ONLINE	04d3a3401fc44f11bfadc8f96881e818	(o/192.168.10.4/DBFS_DG_CD_02_lunarcel02)	[DBFS_DG]
3.	ONLINE	34ea47f993174f3ebf2fe09c9ce8ed9f	(o/192.168.10.5/DBFS_DG_CD_02_lunarcel03)	[DBFS_DG]

Located 3 voting disk(s).

Voting Disk工作正常

7.3 OCR的配置和状态信息

```

Status of Oracle Cluster Registry is as follows :
  Version                     :                  3
  Total space (kbytes)        :          262120
  Used space (kbytes)         :           3576
  Available space (kbytes)    :          258544
  ID                          : 1797008772
  Device/File Name            : +DBFS_DG
                               Device/File integrity check succeeded

                               Device/File not configured
                               Device/File not configured
                               Device/File not configured
                               Device/File not configured

Cluster registry integrity check succeeded

Logical corruption check bypassed due to non-privileged user

```

OCR工作正常

7.4 OCR AUTO备份检查

```

-rw----- 1 root root 7909376 Jan 29 06:07 week.ocr
-rw----- 1 root root 7909376 Feb  5 06:07 week_.ocr
-rw----- 1 root root 7909376 Feb  4 10:07 day.ocr
-rw----- 1 root root 7909376 Feb  5 10:07 day_.ocr
-rw----- 1 root root 7421952 Nov 13 16:42 backup_20121113_164200.ocr
-rw----- 1 root root 7909376 Feb  5 06:07 backup02.ocr
-rw----- 1 root root 7909376 Feb  5 10:07 backup01.ocr
-rw----- 1 root root 7909376 Feb  5 14:07 backup00.ocr

```

OCR自动备份工作正常

7.5 Grid网络环境配置检查

```

[grid@lunardb01 dm03-cluster]$ oifcfg getif
bondeth0 10.224.141.128 global public
bondib0 192.168.8.0 global cluster_interconnect

lunardb01#[/sbin/rc3.d]oifcfg iflist -p -n
eth0 10.224.150.128 PRIVATE 255.255.255.128
bondeth0 10.224.141.128 PRIVATE 255.255.255.128
bondib0 192.168.8.0 PRIVATE 255.255.252.0

```

bondib0	169.254.0.0	UNKNOWN	255.255.0.0
---------	-------------	---------	-------------

公网网卡为bondeth0,私网网卡为bondib0

7.6 私网misscount设置检查

To verify that the CSS misscount is set to 60, execute the following command as the "root" userid on a database server, substituting your environment specific path for :

```
/bin/crsctl get css misscount
```

The output will be similar to:

```
CRS-4678: Successful get misscount 60 for Cluster Synchronization Services
```

The expected output is that the CSS misscount is set to 60.

If it is not, set it executing the following command as the "root" userid on a database server (takes effect on all nodes in a cluster without an Oracle Clusterware restart), substituting your environment specific path for :

```
/bin/crsctl set css misscount 60
```

The output will be similar to:

```
CRS-4684: Successful set of parameter misscount to 60 for Cluster Synchronization Services
```

NOTE: Prior to 11.2, the CSS diagwait parameter was set to aid in debugging by ensuring log files had timely information. In 11.2, this parameter is no longer required and should not be set.

检查结果如下:

CRS-4678: Successful get misscount 60 for Cluster Synchronization Services.

7.7 CRS后台进程运行状态:

```
# dcli -g dbs_group -l root /u01/app/11.2.0.3/grid/bin/crsctl check crs
lunardb01: CRS-4638: Oracle High Availability Services is online
lunardb01: CRS-4537: Cluster Ready Services is online
lunardb01: CRS-4529: Cluster Synchronization Services is online
lunardb01: CRS-4533: Event Manager is online
lunardb02: CRS-4638: Oracle High Availability Services is online
lunardb02: CRS-4537: Cluster Ready Services is online
lunardb02: CRS-4529: Cluster Synchronization Services is online
lunardb02: CRS-4533: Event Manager is online
```

CRS后台进程运行正常。

7.8 CRS资源运行状态:

NAME	TARGET	STATE	SERVER	STATE_DETAILS
Local Resources				
dbfs_mount	ONLINE	ONLINE	lunardb01	
	ONLINE	ONLINE	lunardb02	
ora.DATA_DM03.dg	ONLINE	ONLINE	lunardb01	
	ONLINE	ONLINE	lunardb02	
ora.DBFS_DG.dg	ONLINE	ONLINE	lunardb01	
	ONLINE	ONLINE	lunardb02	
ora.LISTENER.lsnr	ONLINE	ONLINE	lunardb01	
	ONLINE	ONLINE	lunardb02	
ora.RECO_DM03.dg	ONLINE	ONLINE	lunardb01	
	ONLINE	ONLINE	lunardb02	
ora.asm	ONLINE	ONLINE	lunardb01	Started

ora.gsd	ONLINE	ONLINE	lunardb02	Started
	OFFLINE	OFFLINE	lunardb01	
	OFFLINE	OFFLINE	lunardb02	
ora.net1.network	ONLINE	ONLINE	lunardb01	
	ONLINE	ONLINE	lunardb02	
ora.ons	ONLINE	ONLINE	lunardb01	
	ONLINE	ONLINE	lunardb02	
ora.registry.acfs	ONLINE	ONLINE	lunardb01	
	ONLINE	ONLINE	lunardb02	

Cluster Resources				

ora.LISTENER_SCAN1.lsnr				
1	ONLINE	ONLINE	lunardb02	
ora.LISTENER_SCAN2.lsnr				
1	ONLINE	ONLINE	lunardb02	
ora.LISTENER_SCAN3.lsnr				
1	ONLINE	ONLINE	lunardb02	
ora.cvu				
1	ONLINE	ONLINE	lunardb02	
ora.lunardb01.vip				
1	ONLINE	ONLINE	lunardb01	
ora.lunardb02.vip				
1	ONLINE	ONLINE	lunardb02	
ora.nmst.db				
1	ONLINE	ONLINE	lunardb01	Open
2	ONLINE	ONLINE	lunardb02	Open
ora.nmst.nmst_pub.svc				
1	ONLINE	ONLINE	lunardb02	
ora.LUNAR.db				
1	ONLINE	ONLINE	lunardb01	Open
2	ONLINE	ONLINE	lunardb02	Open
ora.LUNAR.LUNAR_pub.svc				
1	ONLINE	ONLINE	lunardb02	
ora.LUNAR.LUNAR_zf.svc				
1	ONLINE	ONLINE	lunardb02	
ora.oc4j				
1	ONLINE	ONLINE	lunardb01	
ora.scan1.vip				
1	ONLINE	ONLINE	lunardb02	
ora.scan2.vip				
1	ONLINE	ONLINE	lunardb02	
ora.scan3.vip				
1	ONLINE	ONLINE	lunardb02	
[grid@lunardb01 ~]\$				

7.9 CRS告警日志文件检查

```
#cd /u01/app/11.2.0.3/grid/log/<hostname>
# more alert<hostname>.log

2013-02-05 14:10:27.906
[crsd(18386)]CRS-2765:Resource 'ora.net1.network' has failed on server
'lunardb01'.
2013-02-05 14:10:28.358
[/u01/app/11.2.0.3/grid/bin/oraagent.bin(18611)]CRS-5016:Process
"/u01/app/11.2.0.3/grid/bin/lsnrctl" spawned by agent
"/u01/app/11.2.0.3/grid/bin/oraagent.bin" for action "check" failed: details at
"(:CLSN00010:)" in
"/u01/app/11.2.0.3/grid/log/lunardb01/agent/crsd/oraagent_grid/oraagent_grid.log"
2013-02-05 14:10:28.372
[/u01/app/11.2.0.3/grid/bin/oraagent.bin(18611)]CRS-5016:Process
"/u01/app/11.2.0.3/grid/bin/lsnrctl" spawned by agent
"/u01/app/11.2.0.3/grid/bin/oraagent.bin" for action "check" failed: details at
"(:CLSN00010:)" in
"/u01/app/11.2.0.3/grid/log/lunardb01/agent/crsd/oraagent_grid/oraagent_grid.log"
2013-02-05 14:10:28.381
[/u01/app/11.2.0.3/grid/bin/oraagent.bin(18611)]CRS-5016:Process
"/u01/app/11.2.0.3/grid/bin/lsnrctl" spawned by agent
"/u01/app/11.2.0.3/grid/bin/oraagent.bin" for action "check" failed: details at
"(:CLSN00010:)" in
```

```
"/u01/app/11.2.0.3/grid/log/lunardb01/agent/crsd/oraagent_grid/oraagent_grid.log"
2013-02-05 14:10:28.528
[/u01/app/11.2.0.3/grid/bin/oraagent.bin(18611)]CRS-5016:Process
"/u01/app/11.2.0.3/grid/opmn/bin/onsctl" spawned by agent
"/u01/app/11.2.0.3/grid/bin/oraagent.bin" for action "check" failed: details at
"(:CLSN00010:)" in
"/u01/app/11.2.0.3/grid/log/lunardb01/agent/crsd/oraagent_grid/oraagent_grid.log"
```

Eth2网卡运行状态为down，导致VIP和SCAN VIP切换至第二个节点

8. ASM实例

8.1 ASM实例初始化参数检查

NAME	VALUE
processes	1024
sga_max_size	1325400064
use_large_pages	TRUE
lock_sga	FALSE
shared_pool_size	0
large_pool_size	16777216
shared_pool_reserved_size	62075699
spfile	+DBFS_DG/dm03-
cluster/asmparameterfile/registry.25	3.799256123
instance_type	asm
cluster_interconnects	192.168.10.2
file_mapping	FALSE
sga_target	1325400064
memory_target	0
memory_max_target	0
cluster_database	TRUE
cluster_database_instances	4
NAME	VALUE
instance_number	2
ldap_directory_sysauth	no
os_roles	FALSE
remote_os_authent	FALSE
remote_os_roles	FALSE
remote_login_passwordfile	EXCLUSIVE
audit_sys_operations	FALSE
instance_name	+ASM2
service_names	+ASM
local_listener	(DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP
	)(HOST=10.224.141.180)(PORT=8
	)
remote_listener	
listener_networks	
parallel_execution_message_size	16384
audit_file_dest	/u01/app/11.2.0.3/grid/rdbms/audit
audit_syslog_level	LOCAL0.INFO
sort_area_size	65536
db_unique_name	+ASM
os_authent_prefix	ops\$
pga_aggregate_target	419430400
workarea_size_policy	AUTO
statistics_level	TYPICAL
asm_diskstring	o/*/*
asm_preferred_read_failure_groups	
asm_diskgroups	DATA_DM03, RECO_DM03
asm_power_limit	1
diagnostic_dest	/u01/app/grid
max_dump_file_size	unlimited

8.2 ASM磁盘组检查

```
SQL> select GROUP_NUMBER,NAME,STATE,TYPE,TOTAL_MB,FREE_MB,
REQUIRED_MIRROR_FREE_MB,USABLE_FILE_MB from v$asm_diskgroup;
```

GROUP_NUMBER	NAME	STATE	TYPE	TOTAL_MB	FREE_MB	REQUIRED_MIRROR_FREE_MB	USABLE_FILE_MB
1	DATA_DM03	MOUNTED	NORMAL	40697856	31482564	13565952	8958306
2	DBFS_DG	MOUNTED	NORMAL	1038240	705600	346080	179760
3	RECO_DM03	MOUNTED	NORMAL	61050816	61048688	20350272	20349208

检测结果：正常，ASM磁盘组存在不少剩余空间

8.3 ASM磁盘组属性检查

```
SQL> select GROUP_NUMBER,name,VALUE from v$asm_attribute;
```

GROUP_NUMBER	NAME	VALUE
1	idp.type	dynamic
1	idp.boundary	auto
1	disk_repair_time	3.6h
1	au_size	4194304
1	sector_size	512
1	compatible.asm	11.2.0.3.0
1	compatible.rdbms	11.2.0.2.0
1	cell.smart_scan_capable	TRUE
1	access_control.enabled	FALSE
1	access_control.umask	066
1	template_version	186646528
1	template.PARAMETERFILE.stripe	0
1	template.PARAMETERFILE.redundancy	18
1	template.PARAMETERFILE.primary_region	0
1	template.PARAMETERFILE.mirror_region	0
1	template.ASMPARAMETERFILE.stripe	0
1	template.ASMPARAMETERFILE.redundancy	18
1	template.ASMPARAMETERFILE.primary_region	0
1	template.ASMPARAMETERFILE.mirror_region	0
1	template.DUMPSET.stripe	0
1	template.DUMPSET.redundancy	18
1	template.DUMPSET.primary_region	0
1	template.DUMPSET.mirror_region	0
1	template.CONTROLFILE.stripe	1
1	template.CONTROLFILE.redundancy	19
1	template.CONTROLFILE.primary_region	0
1	template.CONTROLFILE.mirror_region	0
1	template.FLASHFILE.stripe	0
1	template.FLASHFILE.redundancy	18
1	template.FLASHFILE.primary_region	0
1	template.FLASHFILE.mirror_region	0
1	template.ARCHIVELOG.stripe	0
1	template.ARCHIVELOG.redundancy	18
1	template.ARCHIVELOG.primary_region	0
1	template.ARCHIVELOG.mirror_region	0
1	template.ONLINELOG.stripe	0
1	template.ONLINELOG.redundancy	18
1	template.ONLINELOG.primary_region	0
1	template.ONLINELOG.mirror_region	0
1	template.DATAFILE.stripe	0
1	template.DATAFILE.redundancy	18
1	template.DATAFILE.primary_region	0

1 template.DATFILE.mirror_region	0
1 template.TEMPFILE.stripe	0
1 template.TEMPFILE.redundancy	18
1 template.TEMPFILE.primary_region	0
1 template.TEMPFILE.mirror_region	0
1 template.BACKUPSET.stripe	0
1 template.BACKUPSET.redundancy	18
1 template.BACKUPSET.primary_region	0
1 template.BACKUPSET.mirror_region	0
1 template.AUTOBACKUP.stripe	0
1 template.AUTOBACKUP.redundancy	18
1 template.AUTOBACKUP.primary_region	0
1 template.AUTOBACKUP.mirror_region	0
1 template.XTRANSPORT.stripe	0
1 template.XTRANSPORT.redundancy	18
1 template.XTRANSPORT.primary_region	0
1 template.XTRANSPORT.mirror_region	0
1 template.CHANGETRACKING.stripe	0
1 template.CHANGETRACKING.redundancy	18
1 template.CHANGETRACKING.primary_region	0
1 template.CHANGETRACKING.mirror_region	0
1 template.FLASHBACK.stripe	0
1 template.FLASHBACK.redundancy	18
1 template.FLASHBACK.primary_region	0
1 template.FLASHBACK.mirror_region	0
1 template.DATAGUARDCONFIG.stripe	0
1 template.DATAGUARDCONFIG.redundancy	18
1 template.DATAGUARDCONFIG.primary_region	0
1 template.DATAGUARDCONFIG.mirror_region	0
1 template.OCRFILE.stripe	0
1 template.OCRFILE.redundancy	18
1 template.OCRFILE.primary_region	0
1 template.OCRFILE.mirror_region	0
1 content.type	data
2 disk_repair_time	3.6h
2 au_size	4194304
2 sector_size	512
2 compatible.asm	11.2.0.3.0
2 compatible.rdbms	11.2.0.2.0
2 cell.smart_scan_capable	TRUE
2 access_control.enabled	FALSE
2 access_control.umask	066
2 template_version	186646528
2 template.PARAMETERFILE.stripe	0
2 template.PARAMETERFILE.redundancy	18
2 template.PARAMETERFILE.primary_region	0
2 template.PARAMETERFILE.mirror_region	0
2 template.ASMPARAMETERFILE.stripe	0
2 template.ASMPARAMETERFILE.redundancy	18
2 template.ASMPARAMETERFILE.primary_region	0
2 template.ASMPARAMETERFILE.mirror_region	0
2 template.DUMPSET.stripe	0
2 template.DUMPSET.redundancy	18
2 template.DUMPSET.primary_region	0
2 template.DUMPSET.mirror_region	0
2 template.CONTROLFILE.stripe	1
2 template.CONTROLFILE.redundancy	19
2 template.CONTROLFILE.primary_region	0
2 template.CONTROLFILE.mirror_region	0
2 template.FLASHFILE.stripe	0

2 template.FLASHFILE.redundancy	18
2 template.FLASHFILE.primary_region	0
2 template.FLASHFILE.mirror_region	0
2 template.ARCHIVELOG.stripe	0
2 template.ARCHIVELOG.redundancy	18
2 template.ARCHIVELOG.primary_region	0
2 template.ARCHIVELOG.mirror_region	0
2 template.ONLINELOG.stripe	0
2 template.ONLINELOG.redundancy	18
2 template.ONLINELOG.primary_region	0
2 template.ONLINELOG.mirror_region	0
2 template.DATAFILE.stripe	0
2 template.DATAFILE.redundancy	18
2 template.DATAFILE.primary_region	0
2 template.DATAFILE.mirror_region	0
2 template.TEMPFILE.stripe	0
2 template.TEMPFILE.redundancy	18
2 template.TEMPFILE.primary_region	0
2 template.TEMPFILE.mirror_region	0
2 template.BACKUPSET.stripe	0
2 template.BACKUPSET.redundancy	18
2 template.BACKUPSET.primary_region	0
2 template.BACKUPSET.mirror_region	0
2 template.AUTOBACKUP.stripe	0
2 template.AUTOBACKUP.redundancy	18
2 template.AUTOBACKUP.primary_region	0
2 template.AUTOBACKUP.mirror_region	0
2 template.XTRANSPORT.stripe	0
2 template.XTRANSPORT.redundancy	18
2 template.XTRANSPORT.primary_region	0
2 template.XTRANSPORT.mirror_region	0
2 template.CHANGETRACKING.stripe	0
2 template.CHANGETRACKING.redundancy	18
2 template.CHANGETRACKING.primary_region	0
2 template.CHANGETRACKING.mirror_region	0
2 template.FLASHBACK.stripe	0
2 template.FLASHBACK.redundancy	18
2 template.FLASHBACK.primary_region	0
2 template.FLASHBACK.mirror_region	0
2 template.DATAGUARDCONFIG.stripe	0
2 template.DATAGUARDCONFIG.redundancy	18
2 template.DATAGUARDCONFIG.primary_region	0
2 template.DATAGUARDCONFIG.mirror_region	0
2 template.OCRFILE.stripe	0
2 template.OCRFILE.redundancy	18
2 template.OCRFILE.primary_region	0
2 template.OCRFILE.mirror_region	0
2 idp.type	dynamic
2 idp.boundary	auto
2 content.type	system
3 idp.type	dynamic
3 idp.boundary	auto
3 disk_repair_time	3.6h
3 au_size	4194304
3 sector_size	512
3 compatible.asm	11.2.0.3.0
3 compatible.rdbms	11.2.0.2.0
3 cell.smart_scan_capable	TRUE
3 access_control.enabled	FALSE
3 access_control.umask	066

3 template_version	186646528
3 template.PARAMETERFILE.stripe	0
3 template.PARAMETERFILE.redundancy	18
3 template.PARAMETERFILE.primary_region	0
3 template.PARAMETERFILE.mirror_region	0
3 template.ASMPARAMETERFILE.stripe	0
3 template.ASMPARAMETERFILE.redundancy	18
3 template.ASMPARAMETERFILE.primary_region	0
3 template.ASMPARAMETERFILE.mirror_region	0
3 template.DUMPSET.stripe	0
3 template.DUMPSET.redundancy	18
3 template.DUMPSET.primary_region	0
3 template.DUMPSET.mirror_region	0
3 template.CONTROLFILE.stripe	1
3 template.CONTROLFILE.redundancy	19
3 template.CONTROLFILE.primary_region	0
3 template.CONTROLFILE.mirror_region	0
3 template.FLASHFILE.stripe	0
3 template.FLASHFILE.redundancy	18
3 template.FLASHFILE.primary_region	0
3 template.FLASHFILE.mirror_region	0
3 template.ARCHIVELOG.stripe	0
3 template.ARCHIVELOG.redundancy	18
3 template.ARCHIVELOG.primary_region	0
3 template.ARCHIVELOG.mirror_region	0
3 template.ONLINELOG.stripe	0
3 template.ONLINELOG.redundancy	18
3 template.ONLINELOG.primary_region	0
3 template.ONLINELOG.mirror_region	0
3 template.DATAFILE.stripe	0
3 template.DATAFILE.redundancy	18
3 template.DATAFILE.primary_region	0
3 template.DATAFILE.mirror_region	0
3 template.TEMPFILE.stripe	0
3 template.TEMPFILE.redundancy	18

GROUP_NUMBER	NAME	VALUE
--------------	------	-------

3 template.TEMPFILE.primary_region	0
3 template.TEMPFILE.mirror_region	0
3 template.BACKUPSET.stripe	0
3 template.BACKUPSET.redundancy	18
3 template.BACKUPSET.primary_region	0
3 template.BACKUPSET.mirror_region	0
3 template.AUTOBACKUP.stripe	0
3 template.AUTOBACKUP.redundancy	18
3 template.AUTOBACKUP.primary_region	0
3 template.AUTOBACKUP.mirror_region	0
3 template.XTRANSPORT.stripe	0
3 template.XTRANSPORT.redundancy	18
3 template.XTRANSPORT.primary_region	0
3 template.XTRANSPORT.mirror_region	0
3 template.CHANGETRACKING.stripe	0
3 template.CHANGETRACKING.redundancy	18
3 template.CHANGETRACKING.primary_region	0
3 template.CHANGETRACKING.mirror_region	0
3 template.FLASHBACK.stripe	0
3 template.FLASHBACK.redundancy	18
3 template.FLASHBACK.primary_region	0
3 template.FLASHBACK.mirror_region	0

3	template.DATAGUARDCONFIG.stripe	0
3	template.DATAGUARDCONFIG.redundancy	18
3	template.DATAGUARDCONFIG.primary_region	0
3	template.DATAGUARDCONFIG.mirror_region	0
3	template.OCRFILE.stripe	0
3	template.OCRFILE.redundancy	18
3	template.OCRFILE.primary_region	0
3	template.OCRFILE.mirror_region	0
3	content.type	recovery

检查结果如下:

ASM DATA_DM03.compatible.asm = 11.2.0.3.0

ASM DBFS_DG.compatible.asm = 11.2.0.3.0

ASM RECO_DM03.compatible.asm = 11.2.0.3.0

8.4 ASM磁盘检查

```
SQL> SELECT GROUP_NUMBER,STATE,TOTAL_MB,FREE_MB,NAME,FAILGROUP,PATH FROM V$ASM_DISK
ORDER BY GROUP_NUMBER,PATH
```

GROUP_NUMBER	STATE	TOTAL_MB	FREE_MB	NAME	FAILGROUP	PATH
1	NORMAL	1130496	874444	DATA_DM03_CD_00_LUNARCEL01	LUNARCEL01	
o/192.168.10.3/DATA_DM03_CD_00_lunarcel01						
1	NORMAL	1130496	874612	DATA_DM03_CD_01_LUNARCEL01	LUNARCEL01	
o/192.168.10.3/DATA_DM03_CD_01_lunarcel01						
1	NORMAL	1130496	874424	DATA_DM03_CD_02_LUNARCEL01	LUNARCEL01	
o/192.168.10.3/DATA_DM03_CD_02_lunarcel01						
1	NORMAL	1130496	874440	DATA_DM03_CD_03_LUNARCEL01	LUNARCEL01	
o/192.168.10.3/DATA_DM03_CD_03_lunarcel01						
1	NORMAL	1130496	874460	DATA_DM03_CD_04_LUNARCEL01	LUNARCEL01	
o/192.168.10.3/DATA_DM03_CD_04_lunarcel01						
1	NORMAL	1130496	874700	DATA_DM03_CD_05_LUNARCEL01	LUNARCEL01	
o/192.168.10.3/DATA_DM03_CD_05_lunarcel01						
1	NORMAL	1130496	874604	DATA_DM03_CD_06_LUNARCEL01	LUNARCEL01	
o/192.168.10.3/DATA_DM03_CD_06_lunarcel01						
1	NORMAL	1130496	874420	DATA_DM03_CD_07_LUNARCEL01	LUNARCEL01	
o/192.168.10.3/DATA_DM03_CD_07_lunarcel01						
1	NORMAL	1130496	874412	DATA_DM03_CD_08_LUNARCEL01	LUNARCEL01	
o/192.168.10.3/DATA_DM03_CD_08_lunarcel01						
1	NORMAL	1130496	874596	DATA_DM03_CD_09_LUNARCEL01	LUNARCEL01	
o/192.168.10.3/DATA_DM03_CD_09_lunarcel01						
1	NORMAL	1130496	874624	DATA_DM03_CD_10_LUNARCEL01	LUNARCEL01	
o/192.168.10.3/DATA_DM03_CD_10_lunarcel01						
1	NORMAL	1130496	874440	DATA_DM03_CD_11_LUNARCEL01	LUNARCEL01	
o/192.168.10.3/DATA_DM03_CD_11_lunarcel01						
1	NORMAL	1130496	874484	DATA_DM03_CD_00_LUNARCEL02	LUNARCEL02	
o/192.168.10.4/DATA_DM03_CD_00_lunarcel02						
1	NORMAL	1130496	874540	DATA_DM03_CD_01_LUNARCEL02	LUNARCEL02	
o/192.168.10.4/DATA_DM03_CD_01_lunarcel02						
1	NORMAL	1130496	874416	DATA_DM03_CD_02_LUNARCEL02	LUNARCEL02	
o/192.168.10.4/DATA_DM03_CD_02_lunarcel02						
1	NORMAL	1130496	874792	DATA_DM03_CD_03_LUNARCEL02	LUNARCEL02	
o/192.168.10.4/DATA_DM03_CD_03_lunarcel02						
1	NORMAL	1130496	874392	DATA_DM03_CD_04_LUNARCEL02	LUNARCEL02	
o/192.168.10.4/DATA_DM03_CD_04_lunarcel02						
1	NORMAL	1130496	874328	DATA_DM03_CD_05_LUNARCEL02	LUNARCEL02	
o/192.168.10.4/DATA_DM03_CD_05_lunarcel02						
1	NORMAL	1130496	874424	DATA_DM03_CD_06_LUNARCEL02	LUNARCEL02	
o/192.168.10.4/DATA_DM03_CD_06_lunarcel02						
1	NORMAL	1130496	874520	DATA_DM03_CD_07_LUNARCEL02	LUNARCEL02	
o/192.168.10.4/DATA_DM03_CD_07_lunarcel02						
1	NORMAL	1130496	874396	DATA_DM03_CD_08_LUNARCEL02	LUNARCEL02	
o/192.168.10.4/DATA_DM03_CD_08_lunarcel02						

o/192.168.10.4/DATA_DM03_CD_09_lunarcel02	1 NORMAL	1130496	874716 DATA_DM03_CD_09_LUNARCEL02	LUNARCEL02
o/192.168.10.4/DATA_DM03_CD_10_lunarcel02	1 NORMAL	1130496	874548 DATA_DM03_CD_10_LUNARCEL02	LUNARCEL02
o/192.168.10.4/DATA_DM03_CD_11_lunarcel02	1 NORMAL	1130496	874524 DATA_DM03_CD_11_LUNARCEL02	LUNARCEL02
o/192.168.10.4/DATA_DM03_CD_00_lunarcel03	1 NORMAL	1130496	874504 DATA_DM03_CD_00_LUNARCEL03	LUNARCEL03
o/192.168.10.5/DATA_DM03_CD_01_lunarcel03	1 NORMAL	1130496	874484 DATA_DM03_CD_01_LUNARCEL03	LUNARCEL03
o/192.168.10.5/DATA_DM03_CD_02_lunarcel03	1 NORMAL	1130496	874516 DATA_DM03_CD_02_LUNARCEL03	LUNARCEL03
o/192.168.10.5/DATA_DM03_CD_03_lunarcel03	1 NORMAL	1130496	874456 DATA_DM03_CD_03_LUNARCEL03	LUNARCEL03
o/192.168.10.5/DATA_DM03_CD_04_lunarcel03	1 NORMAL	1130496	874564 DATA_DM03_CD_04_LUNARCEL03	LUNARCEL03
o/192.168.10.5/DATA_DM03_CD_05_lunarcel03	1 NORMAL	1130496	874544 DATA_DM03_CD_05_LUNARCEL03	LUNARCEL03
o/192.168.10.5/DATA_DM03_CD_06_lunarcel03	1 NORMAL	1130496	874480 DATA_DM03_CD_06_LUNARCEL03	LUNARCEL03
o/192.168.10.5/DATA_DM03_CD_07_lunarcel03	1 NORMAL	1130496	874580 DATA_DM03_CD_07_LUNARCEL03	LUNARCEL03
o/192.168.10.5/DATA_DM03_CD_08_lunarcel03	1 NORMAL	1130496	874476 DATA_DM03_CD_08_LUNARCEL03	LUNARCEL03
o/192.168.10.5/DATA_DM03_CD_09_lunarcel03	1 NORMAL	1130496	874540 DATA_DM03_CD_09_LUNARCEL03	LUNARCEL03
o/192.168.10.5/DATA_DM03_CD_10_lunarcel03	1 NORMAL	1130496	874568 DATA_DM03_CD_10_LUNARCEL03	LUNARCEL03
o/192.168.10.5/DATA_DM03_CD_11_lunarcel03	1 NORMAL	1130496	874596 DATA_DM03_CD_11_LUNARCEL03	LUNARCEL03
o/192.168.10.3/DBFS_DG_CD_02_lunarcel01	2 NORMAL	34608	23460 DBFS_DG_CD_02_LUNARCEL01	LUNARCEL01
o/192.168.10.3/DBFS_DG_CD_03_lunarcel01	2 NORMAL	34608	23528 DBFS_DG_CD_03_LUNARCEL01	LUNARCEL01
o/192.168.10.3/DBFS_DG_CD_04_lunarcel01	2 NORMAL	34608	23528 DBFS_DG_CD_04_LUNARCEL01	LUNARCEL01
o/192.168.10.3/DBFS_DG_CD_05_lunarcel01	2 NORMAL	34608	23512 DBFS_DG_CD_05_LUNARCEL01	LUNARCEL01
o/192.168.10.3/DBFS_DG_CD_06_lunarcel01	2 NORMAL	34608	23544 DBFS_DG_CD_06_LUNARCEL01	LUNARCEL01
o/192.168.10.3/DBFS_DG_CD_07_lunarcel01	2 NORMAL	34608	23536 DBFS_DG_CD_07_LUNARCEL01	LUNARCEL01
o/192.168.10.3/DBFS_DG_CD_08_lunarcel01	2 NORMAL	34608	23516 DBFS_DG_CD_08_LUNARCEL01	LUNARCEL01
o/192.168.10.3/DBFS_DG_CD_09_lunarcel01	2 NORMAL	34608	23540 DBFS_DG_CD_09_LUNARCEL01	LUNARCEL01
o/192.168.10.3/DBFS_DG_CD_10_lunarcel01	2 NORMAL	34608	23536 DBFS_DG_CD_10_LUNARCEL01	LUNARCEL01
o/192.168.10.3/DBFS_DG_CD_11_lunarcel01	2 NORMAL	34608	23516 DBFS_DG_CD_11_LUNARCEL01	LUNARCEL01
o/192.168.10.4/DBFS_DG_CD_02_lunarcel02	2 NORMAL	34608	23492 DBFS_DG_CD_02_LUNARCEL02	LUNARCEL02
o/192.168.10.4/DBFS_DG_CD_03_lunarcel02	2 NORMAL	34608	23520 DBFS_DG_CD_03_LUNARCEL02	LUNARCEL02
o/192.168.10.4/DBFS_DG_CD_04_lunarcel02	2 NORMAL	34608	23524 DBFS_DG_CD_04_LUNARCEL02	LUNARCEL02
o/192.168.10.4/DBFS_DG_CD_05_lunarcel02	2 NORMAL	34608	23516 DBFS_DG_CD_05_LUNARCEL02	LUNARCEL02
o/192.168.10.4/DBFS_DG_CD_06_lunarcel02	2 NORMAL	34608	23532 DBFS_DG_CD_06_LUNARCEL02	LUNARCEL02
o/192.168.10.4/DBFS_DG_CD_07_lunarcel02	2 NORMAL	34608	23556 DBFS_DG_CD_07_LUNARCEL02	LUNARCEL02
o/192.168.10.4/DBFS_DG_CD_08_lunarcel02	2 NORMAL	34608	23536 DBFS_DG_CD_08_LUNARCEL02	LUNARCEL02

o/192.168.10.4/DBFS_DG_CD_08_lunarc02	2 NORMAL	34608	23516 DBFS_DG_CD_09_LUNARCEL02	LUNARCEL02
o/192.168.10.4/DBFS_DG_CD_09_lunarc02	2 NORMAL	34608	23504 DBFS_DG_CD_10_LUNARCEL02	LUNARCEL02
o/192.168.10.4/DBFS_DG_CD_10_lunarc02	2 NORMAL	34608	23512 DBFS_DG_CD_11_LUNARCEL02	LUNARCEL02
o/192.168.10.4/DBFS_DG_CD_11_lunarc02	2 NORMAL	34608	23492 DBFS_DG_CD_02_LUNARCEL03	LUNARCEL03
o/192.168.10.5/DBFS_DG_CD_02_lunarc03	2 NORMAL	34608	23520 DBFS_DG_CD_03_LUNARCEL03	LUNARCEL03
o/192.168.10.5/DBFS_DG_CD_03_lunarc03	2 NORMAL	34608	23552 DBFS_DG_CD_04_LUNARCEL03	LUNARCEL03
o/192.168.10.5/DBFS_DG_CD_04_lunarc03	2 NORMAL	34608	23512 DBFS_DG_CD_05_LUNARCEL03	LUNARCEL03
o/192.168.10.5/DBFS_DG_CD_05_lunarc03	2 NORMAL	34608	23552 DBFS_DG_CD_06_LUNARCEL03	LUNARCEL03
o/192.168.10.5/DBFS_DG_CD_06_lunarc03	2 NORMAL	34608	23524 DBFS_DG_CD_07_LUNARCEL03	LUNARCEL03
o/192.168.10.5/DBFS_DG_CD_07_lunarc03	2 NORMAL	34608	23496 DBFS_DG_CD_08_LUNARCEL03	LUNARCEL03
o/192.168.10.5/DBFS_DG_CD_08_lunarc03	2 NORMAL	34608	23520 DBFS_DG_CD_09_LUNARCEL03	LUNARCEL03
o/192.168.10.5/DBFS_DG_CD_09_lunarc03	2 NORMAL	34608	23480 DBFS_DG_CD_10_LUNARCEL03	LUNARCEL03
o/192.168.10.5/DBFS_DG_CD_10_lunarc03	2 NORMAL	34608	23528 DBFS_DG_CD_11_LUNARCEL03	LUNARCEL03
o/192.168.10.5/DBFS_DG_CD_11_lunarc03	3 NORMAL	1695856	1695792 RECO_DM03_CD_00_LUNARCEL01	LUNARCEL01
o/192.168.10.3/RECO_DM03_CD_00_lunarc01	3 NORMAL	1695856	1695804 RECO_DM03_CD_01_LUNARCEL01	LUNARCEL01
o/192.168.10.3/RECO_DM03_CD_01_lunarc01	3 NORMAL	1695856	1695784 RECO_DM03_CD_02_LUNARCEL01	LUNARCEL01
o/192.168.10.3/RECO_DM03_CD_02_lunarc01	3 NORMAL	1695856	1695792 RECO_DM03_CD_03_LUNARCEL01	LUNARCEL01
o/192.168.10.3/RECO_DM03_CD_03_lunarc01	3 NORMAL	1695856	1695800 RECO_DM03_CD_04_LUNARCEL01	LUNARCEL01
o/192.168.10.3/RECO_DM03_CD_04_lunarc01	3 NORMAL	1695856	1695788 RECO_DM03_CD_05_LUNARCEL01	LUNARCEL01
o/192.168.10.3/RECO_DM03_CD_05_lunarc01	3 NORMAL	1695856	1695812 RECO_DM03_CD_06_LUNARCEL01	LUNARCEL01
o/192.168.10.3/RECO_DM03_CD_06_lunarc01	3 NORMAL	1695856	1695796 RECO_DM03_CD_07_LUNARCEL01	LUNARCEL01
o/192.168.10.3/RECO_DM03_CD_07_lunarc01	3 NORMAL	1695856	1695800 RECO_DM03_CD_08_LUNARCEL01	LUNARCEL01
o/192.168.10.3/RECO_DM03_CD_08_lunarc01	3 NORMAL	1695856	1695808 RECO_DM03_CD_09_LUNARCEL01	LUNARCEL01
o/192.168.10.3/RECO_DM03_CD_09_lunarc01	3 NORMAL	1695856	1695800 RECO_DM03_CD_10_LUNARCEL01	LUNARCEL01
o/192.168.10.3/RECO_DM03_CD_10_lunarc01	3 NORMAL	1695856	1695784 RECO_DM03_CD_11_LUNARCEL01	LUNARCEL01
o/192.168.10.3/RECO_DM03_CD_11_lunarc01	3 NORMAL	1695856	1695796 RECO_DM03_CD_00_LUNARCEL02	LUNARCEL02
o/192.168.10.4/RECO_DM03_CD_00_lunarc02	3 NORMAL	1695856	1695800 RECO_DM03_CD_01_LUNARCEL02	LUNARCEL02
o/192.168.10.4/RECO_DM03_CD_01_lunarc02	3 NORMAL	1695856	1695788 RECO_DM03_CD_02_LUNARCEL02	LUNARCEL02
o/192.168.10.4/RECO_DM03_CD_02_lunarc02	3 NORMAL	1695856	1695796 RECO_DM03_CD_03_LUNARCEL02	LUNARCEL02
o/192.168.10.4/RECO_DM03_CD_03_lunarc02	3 NORMAL	1695856	1695796 RECO_DM03_CD_04_LUNARCEL02	LUNARCEL02
o/192.168.10.4/RECO_DM03_CD_04_lunarc02	3 NORMAL	1695856	1695800 RECO_DM03_CD_05_LUNARCEL02	LUNARCEL02
o/192.168.10.4/RECO_DM03_CD_05_lunarc02				

```

3 NORMAL      1695856      1695796 RECO_DM03_CD_06_LUNARCEL02 LUNARCEL02
o/192.168.10.4/RECO_DM03_CD_06_lunarcel02
3 NORMAL      1695856      1695792 RECO_DM03_CD_07_LUNARCEL02 LUNARCEL02
o/192.168.10.4/RECO_DM03_CD_07_lunarcel02
3 NORMAL      1695856      1695796 RECO_DM03_CD_08_LUNARCEL02 LUNARCEL02
o/192.168.10.4/RECO_DM03_CD_08_lunarcel02
3 NORMAL      1695856      1695796 RECO_DM03_CD_09_LUNARCEL02 LUNARCEL02
o/192.168.10.4/RECO_DM03_CD_09_lunarcel02
3 NORMAL      1695856      1695808 RECO_DM03_CD_10_LUNARCEL02 LUNARCEL02
o/192.168.10.4/RECO_DM03_CD_10_lunarcel02
3 NORMAL      1695856      1695800 RECO_DM03_CD_11_LUNARCEL02 LUNARCEL02
o/192.168.10.4/RECO_DM03_CD_11_lunarcel02
3 NORMAL      1695856      1695796 RECO_DM03_CD_00_LUNARCEL03 LUNARCEL03
o/192.168.10.5/RECO_DM03_CD_00_lunarcel03
3 NORMAL      1695856      1695796 RECO_DM03_CD_01_LUNARCEL03 LUNARCEL03
o/192.168.10.5/RECO_DM03_CD_01_lunarcel03
3 NORMAL      1695856      1695808 RECO_DM03_CD_02_LUNARCEL03 LUNARCEL03
o/192.168.10.5/RECO_DM03_CD_02_lunarcel03
3 NORMAL      1695856      1695796 RECO_DM03_CD_03_LUNARCEL03 LUNARCEL03
o/192.168.10.5/RECO_DM03_CD_03_lunarcel03
3 NORMAL      1695856      1695800 RECO_DM03_CD_04_LUNARCEL03 LUNARCEL03
o/192.168.10.5/RECO_DM03_CD_04_lunarcel03
3 NORMAL      1695856      1695796 RECO_DM03_CD_05_LUNARCEL03 LUNARCEL03
o/192.168.10.5/RECO_DM03_CD_05_lunarcel03
3 NORMAL      1695856      1695792 RECO_DM03_CD_06_LUNARCEL03 LUNARCEL03
o/192.168.10.5/RECO_DM03_CD_06_lunarcel03
3 NORMAL      1695856      1695784 RECO_DM03_CD_07_LUNARCEL03 LUNARCEL03
o/192.168.10.5/RECO_DM03_CD_07_lunarcel03
3 NORMAL      1695856      1695796 RECO_DM03_CD_08_LUNARCEL03 LUNARCEL03
o/192.168.10.5/RECO_DM03_CD_08_lunarcel03
3 NORMAL      1695856      1695800 RECO_DM03_CD_09_LUNARCEL03 LUNARCEL03
o/192.168.10.5/RECO_DM03_CD_09_lunarcel03
3 NORMAL      1695856      1695796 RECO_DM03_CD_10_LUNARCEL03 LUNARCEL03
o/192.168.10.5/RECO_DM03_CD_10_lunarcel03
3 NORMAL      1695856      1695804 RECO_DM03_CD_11_LUNARCEL03 LUNARCEL03
o/192.168.10.5/RECO_DM03_CD_11_lunarcel03

```

检测结果：正常

8.5 ASM实例告警日志文件检查

```

$cd /u01/app/grid/diag/asm/+asm/+ASM1/trace
$ more alert_+ASM1.log

$cd /u01/app/grid/diag/asm/+asm/+ASM2/trace
$ more alert_+ASM2.log

```

检测结果：从上次ASM实例重启后，未发现严重错误信息

8.6 Exachk工具对ASM实例健康检查汇总

PASS	ASM Check	ASM processes parameter is set to recommended value	All ASM Instances	View
PASS	SQL Parameter Check	ASM parameter ASM_POWER_LIMIT is set to the default value.	All Instances	View
PASS	SQL Parameter Check	ASM parameter MEMORY_MAX_TARGET is set according to recommended value	All Instances	View
PASS	SQL Parameter Check	ASM parameter PGA_AGGREGATE_TARGET is set according to recommended value	All Instances	View

PASS	SQL Parameter Check	ASM parameter MEMORY_TARGET is set according to recommended value	All Instances	View
PASS	SQL Parameter Check	ASM parameter SGA_TARGET is set according to recommended value.	All Instances	View
PASS	ASM Check	ASM parameter CLUSTER_INTERCONNECTS is set to the recommended value	All ASM Instances	View
PASS	ASM Check	ASM Audit file destination file count <= 100,000	All ASM Instances	View
PASS	ASM Check	Correct number of FailGroups per ASM DiskGroup are configured	All ASM Instances	View
SS	ASM Check	ASM Version is 11.2.0.2 or higher as expected	All ASM Instances	View
PASS	ASM Check	All disk groups have compatible.asm parameter set to recommended values	All ASM Instances	View
PASS	ASM Check	All disk groups have CELL.SMART_SCAN_CAPABLE parameter set to true	All ASM Instances	View
PASS	ASM Check	All disk groups have compatible.rdbms parameter set to recommended values	All ASM Instances	View
PASS	ASM Check	All disk groups have allocation unit size set to 4MB	All ASM Instances	View

9. XXXXX数据库

9.1 检查是否使用rds协议

```
[root@lunardb01 oracle]# dcli -g dbs_group -l root "su - oracle -c
/u01/app/oracle/product/11.2.0.3/dbhome_1/bin/skgxpinf"
lunardb01: rds
lunardb02: rds
```

检测结果：正常

9.2 初始化参数检查

NAME	VALUE
lock_name_space	
processes	2500
sessions	3792
timed_statistics	TRUE
timed_os_statistics	0
resource_limit	FALSE
license_max_sessions	0
license_sessions_warning	0
cpu_count	24
instance_groups	
event	
sga_max_size	17179869184
_enable_NUMA_support	FALSE
use_large_pages	FALSE
pre_page_sga	FALSE
shared_memory_address	0
hi_shared_memory_address	0
use_indirect_data_buffers	FALSE
lock_sga	FALSE
processor_group_name	
shared_pool_size	0
large_pool_size	0
java_pool_size	0
streams_pool_size	0
shared_pool_reserved_size	338899763
java_soft_sessionspace_limit	0
java_max_sessionspace_size	0
spfile	
+DATA_DM03/LUNAR/spfileLUNAR.ora	
instance_type	RDBMS
nls_language	AMERICAN
nls_territory	AMERICA
nls_sort	BINARY
nls_date_language	AMERICAN
nls_date_format	DD-MON-RR
nls_currency	\$
nls_numeric_characters	.,
nls_iso_currency	AMERICA
nls_calendar	GREGORIAN
nls_time_format	HH.MI.SSXFF AM
nls_timestamp_format	DD-MON-RR HH.MI.SSXFF AM
nls_time_tz_format	HH.MI.SSXFF AM TZR
nls_timestamp_tz_format	DD-MON-RR HH.MI.SSXFF AM TZR
nls_dual_currency	\$
nls_comp	BINARY
nls_length_semantics	BYTE

nls_nchar_conv_excp	FALSE
fileio_network_adapters	
filesystemio_options	setall
clonedb	FALSE
_file_size_increase_increment	2143289344
disk_asynch_io	TRUE
tape_asynch_io	TRUE
dbwr_io_slaves	0
backup_tape_io_slaves	FALSE
resource_manager_cpu_allocation	24
resource_manager_plan	
cluster_interconnects	192.168.10.1
file_mapping	FALSE
gcs_server_processes	2
active_instance_count	
sga_target	17179869184
memory_target	0
memory_max_target	0
control_files	
+DATA_DM03/LUNAR/controlfile/current.283.	
	799327245,
+DATA_DM03/LUNAR/controlfile/c	
	urrent.282.799327245
db_file_name_convert	
log_file_name_convert	
control_file_record_keep_time	7
db_block_buffers	0
db_block_checksum	typical
db_ultra_safe	OFF
db_block_size	8192
db_cache_size	0
db_2k_cache_size	0
db_4k_cache_size	0
db_8k_cache_size	0
db_16k_cache_size	0
db_32k_cache_size	0
db_keep_cache_size	0
db_recycle_cache_size	0
db_writer_processes	3
buffer_pool_keep	
buffer_pool_recycle	
db_flash_cache_file	
db_flash_cache_size	0
db_cache_advice	ON
compatible	11.2.0.3.0
log_archive_dest_1	
log_archive_dest_2	
log_archive_dest_3	
log_archive_dest_4	
log_archive_dest_5	
log_archive_dest_6	
log_archive_dest_7	
log_archive_dest_8	
log_archive_dest_9	
log_archive_dest_10	
log_archive_dest_11	
log_archive_dest_12	
log_archive_dest_13	
log_archive_dest_14	
log_archive_dest_15	
log_archive_dest_16	
log_archive_dest_17	

log_archive_dest_18	
log_archive_dest_19	
log_archive_dest_20	
log_archive_dest_21	
log_archive_dest_22	
log_archive_dest_23	
log_archive_dest_24	
log_archive_dest_25	
log_archive_dest_26	
log_archive_dest_27	
log_archive_dest_28	
log_archive_dest_29	
log_archive_dest_30	
log_archive_dest_31	
log_archive_dest_state_1	enable
log_archive_dest_state_2	enable
log_archive_dest_state_3	enable
log_archive_dest_state_4	enable
log_archive_dest_state_5	enable
log_archive_dest_state_6	enable
log_archive_dest_state_7	enable
log_archive_dest_state_8	enable
log_archive_dest_state_9	enable
log_archive_dest_state_10	enable
log_archive_dest_state_11	enable
log_archive_dest_state_12	enable
log_archive_dest_state_13	enable
log_archive_dest_state_14	enable
log_archive_dest_state_15	enable
log_archive_dest_state_16	enable
log_archive_dest_state_17	enable
log_archive_dest_state_18	enable
log_archive_dest_state_19	enable
log_archive_dest_state_20	enable
log_archive_dest_state_21	enable
log_archive_dest_state_22	enable
log_archive_dest_state_23	enable
log_archive_dest_state_24	enable
log_archive_dest_state_25	enable
log_archive_dest_state_26	enable
log_archive_dest_state_27	enable
log_archive_dest_state_28	enable
log_archive_dest_state_29	enable
log_archive_dest_state_30	enable
log_archive_dest_state_31	enable
log_archive_start	FALSE
log_archive_dest	
log_archive_duplex_dest	
log_archive_min_succeed_dest	1
standby_archive_dest	?/dbs/arch
fal_client	
fal_server	
log_archive_trace	0
log_archive_config	
log_archive_local_first	TRUE
log_archive_format	%t_%s_%r.dbf
redo_transport_user	
log_archive_max_processes	4
log_buffer	134217728
log_checkpoint_interval	0
log_checkpoint_timeout	1800
archive_lag_target	0
db_files	5000

db_file_multiblock_read_count	128
read_only_open_delayed	FALSE
cluster_database	TRUE
parallel_server	TRUE
parallel_server_instances	2
cluster_database_instances	2
db_create_file_dest	+DATA_DM03
db_create_online_log_dest_1	+DATA_DM03
db_create_online_log_dest_2	+DATA_DM03
db_create_online_log_dest_3	
db_create_online_log_dest_4	
db_create_online_log_dest_5	
db_recovery_file_dest	
db_recovery_file_dest_size	0
standby_file_management	MANUAL
db_unrecoverable_scn_tracking	TRUE
thread	1
fast_start_io_target	0
fast_start_mttr_target	300
log_checkpoints_to_alert	FALSE
db_lost_write_protect	typical
recovery_parallelism	0
db_flashback_retention_target	1440
dml_locks	16684
replication_dependency_tracking	TRUE
transactions	4171
transactions_per_rollback_segment	5
rollback_segments	

NAME	VALUE
undo_management	AUTO
undo_tablespace	UNDOTBS1
undo_retention	900
fast_start_parallel_rollback	LOW
resumable_timeout	0
instance_number	1
db_block_checking	false
recyclebin	on
db_securefile	PERMITTED
create_stored_outlines	
serial_reuse	disable
_cursor_features_enabled	514
ldap_directory_access	NONE
ldap_directory_sysauth	no
os_roles	FALSE
rdbms_server_dn	
max_enabled_roles	150
remote_os_authent	FALSE
remote_os_roles	FALSE
sec_case_sensitive_logon	TRUE
O7_DICTIONARY_ACCESSIBILITY	FALSE
remote_login_passwordfile	EXCLUSIVE
license_max_users	0
audit_sys_operations	TRUE
global_context_pool_size	
db_domain	
global_names	FALSE
distributed_lock_timeout	60
commit_point_strength	1
global_txn_processes	1
instance_name	LUNAR1
service_names	LUNAR

dispatchers	
shared_servers	0
max_shared_servers	
max_dispatchers	
circuits	
shared_server_sessions	
local_listener	
(DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PR	
OTOCOL=TCP)(HOST=10.224.141.179)(PORT=85	
21))))	
remote_listener	dm03-scan:8521
listener_networks	
cursor_space_for_time	FALSE
session_cached_cursors	50
remote_dependencies_mode	TIMESTAMP
utl_file_dir	/u01/app
smtp_out_server	
plsql_v2_compatibility	FALSE
plsql_warnings	DISABLE:ALL
plsql_code_type	INTERPRETED
plsql_debug	FALSE
plsql_optimize_level	2
plsql_ccflags	
plscope_settings	IDENTIFIERS:NONE
permit_92_wrap_format	TRUE
java_jit_enabled	TRUE
job_queue_processes	10
parallel_min_percent	0
create_bitmap_area_size	8388608
bitmap_merge_area_size	1048576
cursor_sharing	EXACT
result_cache_mode	MANUAL
parallel_min_servers	96
parallel_max_servers	240
parallel_instance_group	
parallel_execution_message_size	16384
hash_area_size	131072
result_cache_max_size	85917696
result_cache_max_result	5
result_cache_remote_expiration	0
shadow_core_dump	partial
background_core_dump	partial
background_dump_dest	/u01/app/oracle/diag/rdbms/LUNAR/LUNAR1/tr
	ace
user_dump_dest	/u01/app/oracle/diag/rdbms/LUNAR/LUNAR1/tr
	ace
core_dump_dest	/u01/app/oracle/diag/rdbms/LUNAR/LUNAR1/cd
	ump
audit_file_dest	/u01/app/oracle/product/11.2.0.3/dbhome_1/rdbms/audit
audit_syslog_level	
object_cache_optimal_size	102400
object_cache_max_size_percent	10
session_max_open_files	10

open_links	4
open_links_per_instance	4
commit_write	
commit_wait	
commit_logging	
optimizer_features_enable	11.2.0.3
fixed_date	
audit_trail	DB
sort_area_size	65536
sort_area_retained_size	0
cell_offload_processing	TRUE
cell_offload_decryption	TRUE
cell_offload_parameters	
cell_offload_compaction	ADAPTIVE
cell_offload_plan_display	AUTO
db_name	LUNAR
db_unique_name	LUNAR
open_cursors	1000
ifile	
sql_trace	FALSE
os_authent_prefix	
optimizer_mode	ALL_ROWS
sql92_security	TRUE
blank_trimming	FALSE
star_transformation_enabled	FALSE
parallel_degree_policy	MANUAL
parallel_adaptive_multi_user	FALSE
parallel_threads_per_cpu	1
parallel_automatic_tuning	FALSE
parallel_io_cap_enabled	FALSE
optimizer_index_cost_adj	100
optimizer_index_caching	0
query_rewrite_enabled	TRUE
query_rewrite_integrity	enforced
pga_aggregate_target	17179869184
workarea_size_policy	AUTO
optimizer_dynamic_sampling	2
statistics_level	TYPICAL
cursor_bind_capture_destination	memory+disk
skip_unusable_indexes	TRUE
optimizer_secure_view_merging	TRUE
ddl_lock_timeout	0
deferred_segment_creation	TRUE
optimizer_use_pending_statistics	FALSE
optimizer_capture_sql_plan_baselines	FALSE
optimizer_use_sql_plan_baselines	TRUE
parallel_min_time_threshold	AUTO
parallel_degree_limit	16
parallel_force_local	FALSE
optimizer_use_invisible_indexes	FALSE
dst_upgrade_insert_conv	TRUE
parallel_servers_target	128
sec_protocol_error_trace_action	TRACE
sec_protocol_error_further_action	CONTINUE
sec_max_failed_login_attempts	10
sec_return_server_release_banner	FALSE
enable_ddl_logging	FALSE
client_result_cache_size	0
client_result_cache_lag	3000
aq_tm_processes	1
hs_autoregister	TRUE
xml_db_events	enable
dg_broker_start	FALSE

dg_broker_config_file1	/u01/app/oracle/product/11.2.0.3/dbhome_1/dbs/dr1LUNAR.dat
dg_broker_config_file2	/u01/app/oracle/product/11.2.0.3/dbhome_1/dbs/dr2LUNAR.dat
olap_page_pool_size	0
asm_diskstring	
asm_preferred_read_failure_groups	
asm_diskgroups	
asm_power_limit	1
control_management_pack_access	DIAGNOSTIC+TUNING
awr_snapshot_time_offset	0
sqltune_category	DEFAULT
diagnostic_dest	/u01/app/oracle
tracefile_identifier	
max_dump_file_size	unlimited
trace_enabled	TRUE

parallel_force_local推荐设置为true

use_large_pages推荐设置为true，即启用large page，具体如何启用large page需要参考MOS 401749.1, 361323.1, and 1392497.1

audit_trail推荐设置为none,同时truncate aud\$表中数据

建议设置 _gc_policy_time=0取消DRM功能

9.3 表空间剩余空间检查

检查结果：正常

9.4 告警日志文件检查

```
Setting Resource Manager plan DEFAULT_MAINTENANCE_PLAN via parameter
Mon Feb 04 22:00:00 2013
Starting background process VKRM
Mon Feb 04 22:00:00 2013
VKRM started with pid=465, OS id=99953
Mon Feb 04 22:00:04 2013
Errors in file /u01/app/oracle/diag/rdbms/LUNAR/LUNAR1/trace/LUNAR1_j001_100126.trc:
ORA-12012: error on auto execute of job "ORACLE_OCM"."MGMT_CONFIG_JOB_2_1"
ORA-29280: invalid directory path
ORA-06512: at "ORACLE_OCM.MGMT_DB_LL_METRICS", line 2436
ORA-06512: at line 1
Mon Feb 04 22:07:39 2013
```

建议：

```
SQL> CREATE DIRECTORY ORACLE_OCM_CONFIG_DIR2 AS
'/oracle/app/oracle/product/11.2.0.3/dbhome_1/ccr/state';
SQL> grant write,read on ORACLE_OCM_CONFIG_DIR2 to ORACLE_OCM;
```

9.5 数据库物理备份

```
SQL>select * from V$RMAN_BACKUP_JOB_DETAILS;
```

无数据库物理备份，建议针对该库规划备份恢复策略

9.6 Exachk工具对DB实例健康检查汇总

FAIL	SQL Check	Table AUD\$[FGA_LOG\$] should use Automatic Segment Space Management for LUNAR	All Databases	View
FAIL	SQL Parameter Check	Database parameter USE_LARGE_PAGES is NOT set to recommended value	All Instances	View
FAIL	SQL Parameter Check	Database parameter GLOBAL_NAMES is NOT set to recommended value	All Instances	View
PASS	SQL Parameter Check	Shared Servers are not in use	All Instances	View
PASS	Patch Check	SCN Headroom is good BUT see IMPORTANT Details about SCN Headroom	All Homes	View
PASS	SQL Check	All bigfile tablespaces have non-default maxbytes values set	All Databases	View
PASS	SQL Parameter Check	Database parameter PARALLEL_EXECUTION_MESSAGE_SIZE is set to recommended value	All Instances	View
PASS	SQL Parameter Check	Database parameter SQL92_SECURITY is set to recommended value	All Instances	View
PASS	SQL Parameter Check	Database parameter OPEN_CURSORS is set to recommended value	All Instances	View
PASS	SQL Parameter Check	Database parameter OS_AUTHENT_PREFIX is set to recommended value	All Instances	View
PASS	SQL Parameter Check	Database parameter PARALLEL_THREADS_PER_CPU is set to recommended value	All Instances	View
PASS	SQL Parameter Check	Database parameter _ENABLE_NUMA_SUPPORT is set to recommended value	All Instances	View
PASS	SQL Parameter Check	Database parameter PARALLEL_ADAPTIVE_MULTI_USER is set to recommended value	All Instances	View
PASS	SQL Parameter Check	Database parameter _file_size_increase_increment is set to the recommended value	All Instances	View
PASS	SQL Check	No disks found which are not part of any disk group	All Databases	View
PASS	SQL Check	SYS.IDGEN1\$ sequence cache size >= 1,000	All Databases	View
PASS	SQL Check	All tablespaces are using Automatic segment storage management	All Databases	View
PASS	SQL Check	GC blocks lost is not occurring	All Databases	View
PASS	SQL Check	SYS.AUDSES\$ sequence cache size >= 10,000	All Databases	View
PASS	SQL Check	RDBMS Version is 11.2.0.2 or higher as expected	All Databases	View
PASS	SQL Check	All tablespaces are locally managed tablespace	All Databases	View

9.7 MAA Scorecard

Outage Type	Status	Type	Message	Status On	Details

DATABASE FAILURE PREVENTION BEST PRACTICES	FAIL	Description Oracle database can be configured with best practices that are applicable to all Oracle databases, including single-instance, Oracle RAC databases, Oracle RAC One Node databases, and the primary and standby databases in Oracle Data Guard configurations. Key HA Benefits: - Improved recoverability - Improved stability Links: - Configuring Oracle Database with Oracle Clusterware - Configuring Oracle Database				
		WARNING	SQL Check	Redo log file size should be >= 4GB	All Databases	View
		WARNING	SQL Check	Database Archivelog Mode should be set to ARCHIVELOG	All Databases	View
		PASS	SQL Parameter Check	Database parameter LOG_BUFFER is set to recommended value	All Instances	View
		PASS	SQL Check	All tablespaces are locally managed tablespace	All Databases	View
		PASS	SQL Check	All tablespaces are using Automatic segment storage management	All Databases	View
		PASS	SQL Check	Default temporary tablespace is set	All Databases	View
		PASS	SQL Parameter Check	Instance is using automatic Undo Management	All Instances	View
COMPUTER FAILURE PREVENTION BEST PRACTICES	PASS	Description Oracle RAC and Oracle Clusterware allow Oracle Database to run any packaged or custom application across a set of clustered servers. This capability provides server side high availability and scalability. If a clustered server fails, then Oracle Database continues running on the surviving servers. When more processing power is needed, you can add another server without interrupting access to data. Key HA Benefits:				

		Zero database downtime for node and instance failures. Application brownout can be zero or seconds compared to minutes and an hour with third party cold cluster failover solutions. Oracle RAC and Oracle Clusterware rolling upgrade for most hardware and software changes excluding Oracle RDBMS patch sets and new database releases. Links: - HABP: Chapter 6: Configuring Oracle Database with Oracle Clusterware - HABP: Chapter 7: Configuring Oracle Database with Oracle RAC - HABP: Chapter 5: Configuring Oracle Database contains Generic HA practices			
	PASS	SQL Parameter Check	fast_start_mttr_target has been changed from default	All Instances	View
STORAGE FAILURES PREVENTION BEST PRACTICES	FAIL	Description The Oracle Storage Grid is implemented using either Oracle Automatic Storage Management (ASM) and Oracle Exadata Storage Server Software or ASM and third-party storage. The Oracle Storage Grid with Exadata seamlessly supports MAA-related technology, improves performance, provides unlimited I/O scalability, is easy to use and manage, and delivers mission-critical availability and reliability to your enterprise. A properly configured storage grid eliminates single point of failure for storage components, including disk, disk controller, network connections or switches. The Exadata Database Machine default configuration is an example of a properly configured storage grid. Key HA Benefits: Zero database downtime for storage related failures and maintenance. Oracle Grid Infrastructure and ASM rolling upgrade. Other References: Oracle 庐 Exadata Storage Server Software User's Guide: Chapter 1: Section: About Oracle ASM for Maximum Availability			

		Links: - Oracle Exadata Database Machine - HABP Chapter 4: Configuring Storage			
	FAIL	SQL Check	No one high redundancy diskgroup configured	All Databases	View
DATA CORRUPTION PREVENTION BEST PRACTICES	FAIL	Description The MAA recommended way to achieve the most comprehensive data corruption prevention and detection is to use Oracle Active Data Guard and configure the DB_BLOCK_CHECKING, DB_BLOCK_CHECKSUM, and DB_LOST_WRITE_PROTECT database initialization parameters on the Primary database and any Data Guard and standby databases. Key HA Benefits - Application downtime can be reduced from hours and days to seconds to no downtime. - Prevention, quick detection and fast repair of data block corruptions. - With Active Data Guard, data block corruptions can be repaired automatically. Links: - Note: 1302539.1 - Best Practices for Corruption Detection, Prevention, and Automatic Repair - in a Data Guard Configuration - - HABP: Chapter 5.1.6: Protect Against Data Corruption - Note: 1265884.1 - Resolving ORA-752 or ORA-600 [3020] During Standby Recovery -			

		HABP: Chapter 13.2.6:			
	FAIL	SQL Parameter Check	Database parameter DB_BLOCK_CHECKSUM is NOT set to recommended value	All Instances	View
	WARNING	OS Check	Database parameter DB_BLOCK_CHECKING on PRIMARY is NOT set to the recommended value.	All Database Servers	View
	PASS	SQL Check	No reported block corruptions in V\$DATABASE_BLOCK_CORRUPTIONS	All Databases	View
	PASS	SQL Parameter Check	Database parameter DB_LOST_WRITE_PROTECT is set to recommended value	All Instances	View
.					
LOGICAL CORRUPTION PREVENTION BEST PRACTICES	FAIL	Description Oracle Flashback Technology enables fast logical failure repair. Oracle recommends that you use automatic undo management with sufficient space to attain your desired undo retention guarantee, enable Oracle Flashback Database, and allocate sufficient space and I/O bandwidth in the fast recovery area. Application monitoring is required for early detection. Effective and fast repair comes from leveraging and rehearsing the most common application specific logical failures and using the different flashback features effectively (e.g flashback query, flashback version query, flashback transaction query, flashback transaction, flashback drop, flashback table, and flashback database). Key HA Benefits: With application monitoring and rehearsed repair actions with flashback technologies, application downtime can reduce from hours and days to the time to detect the logical inconsistency. Fast repair for logical failures caused by malicious or accidental DML or DDL operations. Effect fast point-in-time repair at the appropriate level of granularity: transaction, table, or database. Questions: Can your application or monitoring infrastructure detect logical inconsistencies? Is your operations team prepared to use various flashback technologies to repair quickly and efficiently? Is security practices enforced to prevent unauthorized privileges that can result logical inconsistencies?			

		Links: - HABP: Chapter 5.1.4: Enable Flashback Database - Note: 565535.1 - Flashback Database Best Practices & Performance - - HABP: Chapter 13.2.7: Recovering from Human Error (Recovery with Flashback) - Oracle 11g Database Advanced Security Administrator's Guide				
		FAIL	SQL Check	Flashback on PRIMARY is not configured	All Databases	View
		PASS	SQL Parameter Check	RECYCLEBIN on PRIMARY is set to the recommended value	All Instances	View
		PASS	SQL Parameter Check	Database parameter UNDO_RETENTION on PRIMARY is not null	All Instances	View
DATABASE/CLUSTER/SITE FAILURE PREVENTION BEST PRACTICES	FAIL	Description Oracle 11g and higher Active Data Guard is the real-time data protection and availability solution that eliminates single point of failure by maintaining one or more synchronized physical replicas of the production database. If an unplanned outage of any kind impacts the production database, applications and users can quickly failover to a synchronized standby, minimizing downtime and preventing data loss. An Active Data Guard standby can be used to offload read-only applications, ad-hoc queries, and backups from the primary database or be dual-purposed as a test system at the same time it provides disaster protection. An Active Data Guard standby can also be used to minimize downtime for planned maintenance when upgrading to new Oracle Database patch sets and releases and for select migrations. For zero data loss protection and fastest recovery time, deploy a local Data Guard standby database with Data Guard Fast-Start Failover and integrated client failover. For protection against outages impacting both the primary and the local standby or the entire data center, or a broad geography, deploy a second Data Guard standby database at a remote location. Key HA Benefits: With Oracle 11g release 2 and higher Active Data Guard and real time apply, data block corruptions can be repaired automatically and downtime can be reduced from hours and days of application impact to zero downtime with zero data loss.				

With MAA best practices, Data Guard Fast-Start Failover (typically a local standby) and integrated client failover, downtime from database, cluster and site failures can be reduced from hours to days and seconds and minutes.

With remote standby database (Disaster Recovery Site), you have protection from complete site failures.

In all cases, the Active Data Guard instances can be active and used for other activities.

Data Guard can reduce risks and downtime for planned maintenance activities by using Database rolling upgrade with transient logical standby, standby-first patch apply and database migrations.

Active Data Guard provides optimal data protection by using physical replication and comprehensive Oracle validation to maintain an exact byte-for-byte copy of the primary database that can be open read-only to offload reporting, ad-hoc queries and backups. For other advanced replication requirements where read-write access to a replica database is required while it is being synchronized with the primary database see Oracle GoldenGate logical replication. Oracle GoldenGate can be used to support heterogeneous database platforms and database releases, an effective read-write full or subset logical replica and to reduce or eliminate downtime for application, database or system changes. Oracle GoldenGate flexible logical replication solution 欽機 main trade-off is the additional administration for application developer and database administrators.

Links:

- Oracle Data Guard: Disaster Recovery for Oracle Exadata Database Machine
- Note: 1265700.1 - Oracle Patch Assurance - Data Guard Standby-First Patch Apply -
- Note: 1302539.1 - Best Practices for Corruption Detection, Prevention, and Automatic Repair - in a Data Guard Configuration -
- HABP: Chapter 9: Configuring Oracle Data Guard
- Goldengate resources

FAIL

SQL Check

Primary database is NOT protected with Data Guard (standby database) for real-time data protection and availability

All Databases

View

NETWORK FAILURE PREVENTION BEST PRACTICES	INFO	Description Redundant client and interconnect network connectivity using components such as dual-ported Quad Data Rate (QDR) Host Channel Adapters (HCAs) and redundant switches to ensure no point of failure in your network topology. Configuring the same redundancy for client access by network bonding is recommended. Additional servers such as media and ETL servers should also be configured with redundant networks. Links: Deploying Oracle Maximum Availability Architecture with Exadata Database Machine			
CLIENT FAILOVER OPERATIONAL BEST PRACTICES	PASS	Description A highly available architecture requires the ability of the application tier to transparently fail over to a surviving instance or database advertising the required service. This ensures that applications are generally available or minimally impacted in the event of node failure, instance failure, or database failures. Oracle listeners can be configured to throttle incoming connections to avoid logon storms after a database node or instance failure. The connection rate limiter feature in the Oracle Net Listener enables a database administrator (DBA) to limit the number of new connections handled by the listener. Links: - Client Failover Best Practices for Highly Available Oracle Databases: Oracle Database 11g Release 2 - Oracle WebLogic Server and Highly Available Oracle Databases: Oracle Integrated Maximum Availability Solutions - Net Services Reference Guide: Connection Rate Limiter Parameters - HABP: Chapter 11: Configuring Fast Connection Failover			
	PASS	OS Check	Clusterware is running	All Database Servers	View
OPERATIONAL BEST PRACTICES	INFO	Description Operational best practices are an essential prerequisite to high availability. The integration of Oracle Maximum Availability Architecture (MAA) operational and configuration best practices with Oracle Exadata Database Machine			

		(Exadata MAA) provides the most comprehensive high availability solution available for the Oracle Database. Links: - HABP: Chapter 2: Operational Prerequisites to Maximizing Availability - MAA Paper: MAA Best Practices for Oracle Exadata Database Machine
SOFTWARE MAINTENANCE BEST PRACTICES	INFO	Description Periodic software updates ensure that critical issues are avoided. Check for critical alerts every month and apply patches if required. Plan for critical patch updates (e.g. PSUs, CPUs, Exadata Bundle Patches) every 3-6 months and plan for database major releases (e.g. 11.2.0.2 to 11.2.0.3 or 11g to 12g) every 12-24 months. Proper testing practices also ensure that new software changes do not incur any adverse effects. Links: - Note: 888828.1 - Database Machine and Exadata Storage Server 11g Release 2 (11.2) Supported Versions - - Note: 756671.1 - Oracle Recommended Patches -- Oracle Database - - Note: 1461240.1 - Exadata Database Machine Planned Software and Hardware Maintenance Guide - - Note: 1262380.1 - Exadata Patching Overview and Patch Testing Guidelines -
CONSOLIDATION DATABASE PRACTICES	INFO	Description Database consolidation requires additional planning and management to ensure HA requirements are met. Links: - Best Practices For Database Consolidation On Exadata Database Machine - Oracle Database Cloud - Note: 1386048.1 - Schema Recovery Options in a Consolidated

		Environment - Using Oracle Database Resource Manager
--	--	--

目前数据库LUNAR运行在非归档模式下，建议启用归档模式

10. 硬件相关检查

10.1 database server

10.1.1 全系统运行情况:

Lunar2db01

System Overview			
View system summary information. You may also change power state and view system status and fault information.			
Product Name:	SUN FIRE X4170 M2 SERVER		
Part/Serial Number:	7013703 / 1139FMM12Y		
Host Power:	On	Change...	
System Status:	Normal	View...	
BIOS Version:	08080102		
SP Hostname:	gxx2db01-ilom		
Uptime:	3 days, 03:52:08		
IP Address:	10.100.84.118		
ILOM Version:	v3.0.18.10 r65138		

显示系统状态System Status（Normal）,正常

Lunar2db02

System Overview			
View system summary information. You may also change power state and view system status and fault information.			
Product Name:	SUN FIRE X4170 M2 SERVER		
Part/Serial Number:	7013703 / 1139FMM11F		
Host Power:	On	Change...	
System Status:	Normal	View...	
BIOS Version:	08080102		
SP Hostname:	gxx2db02-ilom		
Uptime:	3 days, 03:54:13		
IP Address:	10.100.84.119		
ILOM Version:	v3.0.18.10 r65138		

显示系统状态System Status（Normal）,正常

10.1.2 组件状态

Lunar2db02

名称			状态
全系统	/SYS	Host System	OK
主板	/SYS/MB	Motherboard	OK
千兆网口	/SYS/MB/NET0	Network Interface	OK
	/SYS/MB/NET1	Network Interface	OK
	/SYS/MB/NET2	Network Interface	OK
	/SYS/MB/NET3	Network Interface	OK
CPU	/SYS/MB/P0	Host Processor	OK

内存条	/SYS/MB/P0/D1	DIMM	OK
	/SYS/MB/P0/D2	DIMM	OK
	/SYS/MB/P0/D4	DIMM	OK
	/SYS/MB/P0/D5	DIMM	OK
	/SYS/MB/P0/D7	DIMM	OK
	/SYS/MB/P0/D8	DIMM	OK
CPU	/SYS/MB/P1	Host Processor	OK
内存条	/SYS/MB/P1/D1	DIMM	OK
	/SYS/MB/P1/D2	DIMM	OK
	/SYS/MB/P1/D4	DIMM	OK
	/SYS/MB/P1/D5	DIMM	OK
	/SYS/MB/P1/D7	DIMM	OK
	/SYS/MB/P1/D8	DIMM	OK
PCIE插槽模块	/SYS/MB/RISER0/PCIE0	PCIE Module	OK
	/SYS/MB/RISER1/PCIE1	PCIE Module	OK
	/SYS/MB/RISER2/PCIE2	PCIE Module	OK
SP控制器	/SYS/SP	Service Processor	OK
电源	/SYS/PS0	Power Supply FRU	OK
	/SYS/PS1	Power Supply FRU	OK
硬盘背板	/SYS/DBP	Disk Backplane	OK
分电板	/SYS/PDB	Power Distribution Board	OK
前风扇板	/SYS/FB	Front Fan Board	OK
风扇模块	/SYS/FB/FM0	Front Fan Module	OK
	/SYS/FB/FM1	Front Fan Module	OK
	/SYS/FB/FM2	Front Fan Module	OK
	/SYS/FB/FM3	Front Fan Module	OK

Lunar2db02

名称			状态
全系统	/SYS	Host System	OK
主板	/SYS/MB	Motherboard	OK
千兆网口	/SYS/MB/NET0	Network Interface	OK
	/SYS/MB/NET1	Network Interface	OK
	/SYS/MB/NET2	Network Interface	OK
	/SYS/MB/NET3	Network Interface	OK
CPU	/SYS/MB/P0	Host Processor	OK
内存条	/SYS/MB/P0/D1	DIMM	OK
	/SYS/MB/P0/D2	DIMM	OK
	/SYS/MB/P0/D4	DIMM	OK
	/SYS/MB/P0/D5	DIMM	OK
	/SYS/MB/P0/D7	DIMM	OK
	/SYS/MB/P0/D8	DIMM	OK
CPU	/SYS/MB/P1	Host Processor	OK
内存条	/SYS/MB/P1/D1	DIMM	OK
	/SYS/MB/P1/D2	DIMM	OK
	/SYS/MB/P1/D4	DIMM	OK
	/SYS/MB/P1/D5	DIMM	OK
	/SYS/MB/P1/D7	DIMM	OK
	/SYS/MB/P1/D8	DIMM	OK

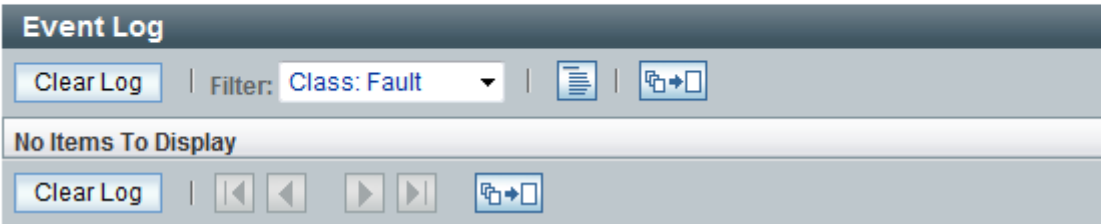
PCIE插槽模块	/SYS/MB/RISER0/PCIE0	PCIE Module	OK
	/SYS/MB/RISER1/PCIE1	PCIE Module	OK
	/SYS/MB/RISER2/PCIE2	PCIE Module	OK
SP控制器	/SYS/SP	Service Processor	OK
电源	/SYS/PS0	Power Supply FRU	OK
	/SYS/PS1	Power Supply FRU	OK
硬盘背板	/SYS/DBP	Disk Backplane	OK
分电板	/SYS/PDB	Power Distribution Board	OK
前风扇板	/SYS/FB	Front Fan Board	OK
风扇模块	/SYS/FB/FM0	Front Fan Module	OK
	/SYS/FB/FM1	Front Fan Module	OK
	/SYS/FB/FM2	Front Fan Module	OK
	/SYS/FB/FM3	Front Fan Module	OK

10.1.3 事件（fault）：

Lunar2db01

Event Log

Displays every event for the SP. Click the *Clear Log* button to delete all current log entries.

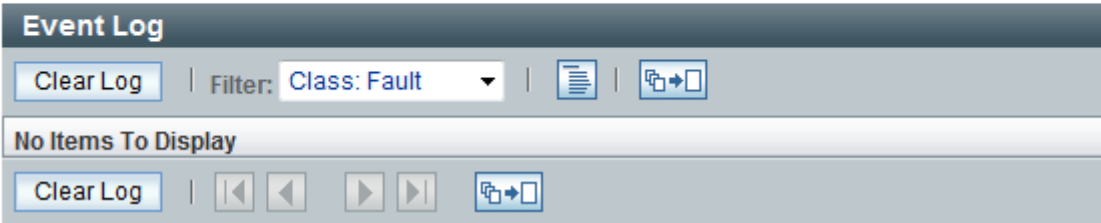


无异常事件

Lunar2db02

Event Log

Displays every event for the SP. Click the *Clear Log* button to delete all current log entries.



无异常事件

10.1.4 总结：

Database server各节点组件运行状态正常，无异常事件。

10.2 Storage cells

10.2.1 全系统状态:

lunarcel01

System Overview	
View system summary information. You may also change power state and view system status and fault information.	
Product Name:	SUN FIRE X4270 M2 SERVER
Part/Serial Number:	602-4981-02 / 1135FMMOG7
Host Power:	On Change...
System Status:	Normal View...
BIOS Version:	08080102
SP Hostname:	gxx2ce.01-ilom
Uptime:	3 days, 04:00:48
IP Address:	10.100.84.126
ILOM Version:	v3.0.18.10 r85138

lunarcel02

System Overview	
View system summary information. You may also change power state and view system status and fault information.	
Product Name:	SUN FIRE X4270 M2 SERVER
Part/Serial Number:	602-4981-02 / 1135FMMOFT
Host Power:	On Change...
System Status:	Normal View...
BIOS Version:	08080102
SP Hostname:	gxx2ce.02-ilom
Uptime:	3 days, 04:01:50
IP Address:	10.100.84.127
ILOM Version:	v3.0.18.10 r85138

lunarcel03

System Overview	
View system summary information. You may also change power state and view system status and fault information.	
Product Name:	SUN FIRE X4270 M2 SERVER
Part/Serial Number:	602-4981-02 / 1105FMMOM3
Host Power:	On Change...
System Status:	Normal View...
BIOS Version:	08080102
SP Hostname:	gxx2ce.03-ilom
Uptime:	3 days, 04:02:31
IP Address:	10.100.84.128
ILOM Version:	v3.0.18.10 r85138

10.2.2 组件状态

lunarcel01

名称			状态
全系统	/SYS	Host System	OK
主板	/SYS/MB	Motherboard	OK
千兆网口	/SYS/MB/NET0	Network Interface	OK
	/SYS/MB/NET1	Network Interface	OK
	/SYS/MB/NET2	Network Interface	OK
	/SYS/MB/NET3	Network Interface	OK
CPU	/SYS/MB/P0	Host Processor	OK
内存条	/SYS/MB/P0/D2	DIMM	OK
	/SYS/MB/P0/D5	DIMM	OK
	/SYS/MB/P0/D8	DIMM	OK
CPU	/SYS/MB/P1	Host Processor	OK
内存条	/SYS/MB/P1/D2	DIMM	OK
	/SYS/MB/P1/D5	DIMM	OK
	/SYS/MB/P1/D8	DIMM	OK
PCIE插槽模块	/SYS/MB/RISER0/PCIE0	PCIE Module	OK
	/SYS/MB/RISER0/PCIE3	PCIE Module	OK
	/SYS/MB/RISER1/PCIE1	PCIE Module	OK
F20闪存卡	/SYS/MB/RISER1/PCIE1/F20CARD	F20 Card	OK
PCIE插槽模块	/SYS/MB/RISER1/PCIE4	PCIE Module	OK
F20闪存卡	/SYS/MB/RISER1/PCIE4/F20CARD	F20 Card	OK
PCIE插槽模块	/SYS/MB/RISER2/PCIE2	PCIE Module	OK
F20闪存卡	/SYS/MB/RISER2/PCIE2/F20CARD	F20 Card	OK
PCIE插槽模块	/SYS/MB/RISER2/PCIE5	PCIE Module	OK
F20闪存卡	/SYS/MB/RISER2/PCIE5/F20CARD	F20 Card	OK
SP控制器	/SYS/SP	Service Processor	OK
电源	/SYS/PS0	Power Supply FRU	OK
	/SYS/PS1	Power Supply FRU	OK
硬盘背板	/SYS/DBP	Disk Backplane	OK
分电板	/SYS/PDB	Power Distribution Board	OK
前风扇板	/SYS/FB	Front Fan Board	OK
风扇模块	/SYS/FB/FM0	Front Fan Module	OK
	/SYS/FB/FM1	Front Fan Module	OK
	/SYS/FB/FM2	Front Fan Module	OK
	/SYS/FB/FM3	Front Fan Module	OK
	/SYS/FB/FM4	Front Fan Module	OK
	/SYS/FB/FM5	Front Fan Module	OK

lunarcel02

名称			状态
全系统	/SYS	Host System	OK
主板	/SYS/MB	Motherboard	OK
千兆网口	/SYS/MB/NET0	Network Interface	OK
	/SYS/MB/NET1	Network Interface	OK
	/SYS/MB/NET2	Network Interface	OK
	/SYS/MB/NET3	Network Interface	OK
CPU	/SYS/MB/P0	Host Processor	OK
内存条	/SYS/MB/P0/D2	DIMM	OK
	/SYS/MB/P0/D5	DIMM	OK

	/SYS/MB/P0/D8	DIMM	OK
CPU	/SYS/MB/P1	Host Processor	OK
内存条	/SYS/MB/P1/D2	DIMM	OK
	/SYS/MB/P1/D5	DIMM	OK
	/SYS/MB/P1/D8	DIMM	OK
PCIE插槽模块	/SYS/MB/RISER0/PCIE0	PCIE Module	OK
	/SYS/MB/RISER0/PCIE3	PCIE Module	OK
	/SYS/MB/RISER1/PCIE1	PCIE Module	OK
F20闪存卡	/SYS/MB/RISER1/PCIE1/F20CARD	F20 Card	OK
PCIE插槽模块	/SYS/MB/RISER1/PCIE4	PCIE Module	OK
F20闪存卡	/SYS/MB/RISER1/PCIE4/F20CARD	F20 Card	OK
PCIE插槽模块	/SYS/MB/RISER2/PCIE2	PCIE Module	OK
F20闪存卡	/SYS/MB/RISER2/PCIE2/F20CARD	F20 Card	OK
PCIE插槽模块	/SYS/MB/RISER2/PCIE5	PCIE Module	OK
F20闪存卡	/SYS/MB/RISER2/PCIE5/F20CARD	F20 Card	OK
SP控制器	/SYS/SP	Service Processor	OK
电源	/SYS/PS0	Power Supply FRU	OK
	/SYS/PS1	Power Supply FRU	OK
硬盘背板	/SYS/DBP	Disk Backplane	OK
分电板	/SYS/PDB	Power Distribution Board	OK
前风扇板	/SYS/FB	Front Fan Board	OK
风扇模块	/SYS/FB/FM0	Front Fan Module	OK
	/SYS/FB/FM1	Front Fan Module	OK
	/SYS/FB/FM2	Front Fan Module	OK
	/SYS/FB/FM3	Front Fan Module	OK
	/SYS/FB/FM4	Front Fan Module	OK
	/SYS/FB/FM5	Front Fan Module	OK

lunarcel03

名称			状态
全系统	/SYS	Host System	OK
主板	/SYS/MB	Motherboard	OK
千兆网口	/SYS/MB/NET0	Network Interface	OK
	/SYS/MB/NET1	Network Interface	OK
	/SYS/MB/NET2	Network Interface	OK
	/SYS/MB/NET3	Network Interface	OK
CPU	/SYS/MB/P0	Host Processor	OK
内存条	/SYS/MB/P0/D2	DIMM	OK
	/SYS/MB/P0/D5	DIMM	OK
	/SYS/MB/P0/D8	DIMM	OK
CPU	/SYS/MB/P1	Host Processor	OK
内存条	/SYS/MB/P1/D2	DIMM	OK
	/SYS/MB/P1/D5	DIMM	OK
	/SYS/MB/P1/D8	DIMM	OK
PCIE插槽模块	/SYS/MB/RISER0/PCIE0	PCIE Module	OK
	/SYS/MB/RISER0/PCIE3	PCIE Module	OK
	/SYS/MB/RISER1/PCIE1	PCIE Module	OK
F20闪存卡	/SYS/MB/RISER1/PCIE1/F20CARD	F20 Card	OK
PCIE插槽模块	/SYS/MB/RISER1/PCIE4	PCIE Module	OK
F20闪存卡	/SYS/MB/RISER1/PCIE4/F20CARD	F20 Card	OK

PCIE插槽模块	/SYS/MB/RISER2/PCIE2	PCIE Module	OK
F20闪存卡	/SYS/MB/RISER2/PCIE2/F20CARD	F20 Card	OK
PCIE插槽模块	/SYS/MB/RISER2/PCIE5	PCIE Module	OK
F20闪存卡	/SYS/MB/RISER2/PCIE5/F20CARD	F20 Card	OK
SP控制器	/SYS/SP	Service Processor	OK
电源	/SYS/PS0	Power Supply FRU	OK
	/SYS/PS1	Power Supply FRU	OK
硬盘背板	/SYS/DBP	Disk Backplane	OK
分电板	/SYS/PDB	Power Distribution Board	OK
前风扇板	/SYS/FB	Front Fan Board	OK
风扇模块	/SYS/FB/FM0	Front Fan Module	OK
	/SYS/FB/FM1	Front Fan Module	OK
	/SYS/FB/FM2	Front Fan Module	OK
	/SYS/FB/FM3	Front Fan Module	OK
	/SYS/FB/FM4	Front Fan Module	OK
	/SYS/FB/FM5	Front Fan Module	OK

10.2.3 事件 (fault) :

lunarcel01

无异常

lunarcel02

无异常

lunarcel03

无异常

10.2.4 磁盘状态

磁盘	状态
DATA_LUNAR2_CD_00_lunarcel03	active
DATA_LUNAR2_CD_01_lunarcel03	active
DATA_LUNAR2_CD_02_lunarcel03	active
DATA_LUNAR2_CD_03_lunarcel03	active
DATA_LUNAR2_CD_04_lunarcel03	active
DATA_LUNAR2_CD_05_lunarcel03	active
DATA_LUNAR2_CD_06_lunarcel03	active
DATA_LUNAR2_CD_07_lunarcel03	active
DATA_LUNAR2_CD_08_lunarcel03	active
DATA_LUNAR2_CD_09_lunarcel03	active
DATA_LUNAR2_CD_10_lunarcel03	active
DATA_LUNAR2_CD_11_lunarcel03	active
DBFS_DG_CD_02_lunarcel03	active
DBFS_DG_CD_03_lunarcel03	active
DBFS_DG_CD_04_lunarcel03	active
DBFS_DG_CD_05_lunarcel03	active
DBFS_DG_CD_06_lunarcel03	active
DBFS_DG_CD_07_lunarcel03	active
DBFS_DG_CD_08_lunarcel03	active

DBFS_DG_CD_09_lunarcel03	active
DBFS_DG_CD_10_lunarcel03	active
DBFS_DG_CD_11_lunarcel03	active
RECO_LUNAR2_CD_00_lunarcel03	active
RECO_LUNAR2_CD_01_lunarcel03	active
RECO_LUNAR2_CD_02_lunarcel03	active
RECO_LUNAR2_CD_03_lunarcel03	active
RECO_LUNAR2_CD_04_lunarcel03	active
RECO_LUNAR2_CD_05_lunarcel03	active
RECO_LUNAR2_CD_06_lunarcel03	active
RECO_LUNAR2_CD_07_lunarcel03	active
RECO_LUNAR2_CD_08_lunarcel03	active
RECO_LUNAR2_CD_09_lunarcel03	active
RECO_LUNAR2_CD_10_lunarcel03	active
RECO_LUNAR2_CD_11_lunarcel03	active

10.2.5 总结:

存储的各模块状态正常

10.3 Oracle Linux操作系统检查

10.3.1 LUNAR2DB1

硬件检测		
硬件机型	EXADATA X2-4	
IP	bondeth0 10.19.33.1 bondeth0:1 10.19.33.9 bondeth0:3 10.19.33.18 bondeth0:5 10.19.33.17 eth0 10.10.84.96	
电源情况	正常	
运行情况	正常	
系统检测		
硬盘情况	本地硬盘	<pre>[root@Lunar2db01 ~]# df -h Filesystem Size Used Avail Use% Mounted on /dev/mapper/VGExaDb-LVDbSys1 30G 15G 14G 51% / /dev/sda1 502M 30M 447M 7% /boot /dev/mapper/VGExaDb-LVDbOra1 99G 47G 47G 50% /u01 tmpfs 81G 8.1M 81G 1% /dev/shm /dev/mapper/datavg-lv_data 549G 278G 243G 54% /backup dbfs-dbfs@dbfs:/ 800G 1.1G 799G 1% /data</pre>
	使用率过高的磁盘	无

	IO	正常
CPU	使用情况	Cpu(s): 0.2%us, 0.1%sy, 0.0%ni, 99.6%id, 0.0%wa, 0.0%hi, 0.0%si, 0.0%st
	运行情况	正常
	消耗CPU进程	无
内存	使用情况	正常
	运行情况	Mem: 98848188k total, 91479576k used, 7368612k free, 399364k buffers
swap	使用情况	正常
	运行情况	Swap: 25165816k total, 2813032k used, 22352784k free, 49323060k cached
IO	状态	正常
Systemlog	系统日志	/var/log/messages
	日志情况	正常
userlog	用户日志	/var/log/secure
	日志情况	正常

10.3.2 LUNAR2DB2

硬件检测							
硬件机型	EXADATA X2-4						
IP	bondeth0	10.19.33.2					
	bondeth0:1	10.19.33.10					
	bondeth0:2	10.19.33.19					
	eth0	10.10.84.97					
电源情况	正常						
运行情况	正常						
系统检测							
硬盘情况	本地硬盘	Filesystem	Size	Used	Avail	Use%	Mounted on
		/dev/mapper/VGExaDb-LVDbSys1					
			30G	7.5G	21G	27%	/
		/dev/sda1	502M	30M	447M	7%	/boot
		/dev/mapper/VGExaDb-LVDbOra1					
			99G	41G	53G	44%	/u01
		tmpfs	81G	0	81G	0%	/dev/shm
		/dev/mapper/dataavg-lv_data					
			549G	189G	332G	37%	/backup
	使用率过高的磁盘	无					
	IO	正常					

CPU	使用情况	Cpu(s): 0.3%us, 0.3%sy, 0.0%ni, 99.2%id, 0.0%wa, 0.0%hi, 0.2%si, 0.0%st
	运行情况	正常
	消耗CPU进程	无
内存	使用情况	正常
	运行情况	Mem: 98848188k total, 98165684k used, 682504k free, 4204464k buffers
swap	使用情况	正常
	运行情况	Swap: 25165816k total, 580k used, 25165236k free, 57309224k cached
IO	状态	正常
Systemlog	系统日志	/var/log/messages
	日志情况	正常
userlog	用户日志	/var/log/secure
	日志情况	正常

10.3.3 LUNARCEL01

硬件检测							
硬件机型	EXADATA X2-2						
IP	Eth0 10.10.84.104						
电源情况	正常						
运行情况	正常						
系统检测							
硬盘情况	本地硬盘	Filesystem	Size	Used	Avail	Use%	Mounted on
		/dev/md6	9.9G	7.4G	2.0G	80%	/
		tmpfs	12G	0	12G	0%	/dev/shm
		/dev/md8	2.0G	681M	1.3G	36%	/opt/oracle
		/dev/md4	116M	61M	49M	56%	/boot
	/dev/md11	2.3G	97M	2.1G	5%	/var/log/oracle	
	使用率过高的磁盘	无					
IO	正常						
CPU	使用情况	Cpu(s): 0.0%us, 0.1%sy, 0.0%ni, 99.8%id, 0.1%wa, 0.0%hi, 0.0%si, 0.0%st					
	运行情况	正常					
	消耗CPU进程	无					
内存	使用情况	正常					
	运行情况	Mem: 24530660k total, 17461680k used, 7068980k free, 157988k buffers					
swap	使用情况	正常					
	运行情况	Swap: 2104376k total, 0k used, 2104376k free, 3281920k cached					

IO	状态	正常
Systemlog	系统日志	/var/log/messages
	日志情况	正常
userlog	用户日志	/var/log/secure
	日志情况	正常

10.3.4 LUNARCEL02

硬件检测						
硬件机型	EXADATA X2-2					
IP	Eth0 10.10.84.105					
电源情况	正常					
运行情况	正常					
系统检测						
硬盘情况	本地硬盘	Filesystem	Size	Used	Avail	Use% Mounted on
		/dev/md6	9.9G	7.5G	2.0G	80% /
		tmpfs	12G	0	12G	0% /dev/shm
		/dev/md8	2.0G	683M	1.3G	36% /opt/oracle
		/dev/md4	116M	61M	49M	56% /boot
	/dev/md11	2.3G	97M	2.1G	5% /var/log/oracle	
	使用率过高的磁盘	无				
	IO	正常				
CPU	使用情况	Cpu(s): 0.3%us, 0.4%sy, 0.0%ni, 99.2%id, 0.1%wa, 0.0%hi, 0.0%si, 0.0%st				
	运行情况	正常				
	消耗CPU进程	无				
内存	使用情况	正常				
	运行情况	Mem: 24530660k total, 17467956k used, 7062704k free, 158356k buffers				
swap	使用情况	正常				
	运行情况	Swap: 2104376k total, 0k used, 2104376k free, 3283764k cached				
IO	状态	正常				
Systemlog	系统日志	/var/log/messages				
	日志情况	正常				
userlog	用户日志	/var/log/secure				
	日志情况	正常				

10.3.5 LUNARCEL03

硬件检测	
硬件机型	EXADATA X2-2

IP	Eth0 10.10.84.106						
电源情况	正常						
运行情况	正常						
系统检测							
硬盘情况	本地硬盘	Filesystem	Size	Used	Avail	Use%	Mounted on
		/dev/md6	9.9G	7.5G	2.0G	80%	/
		tmpfs	12G	0	12G	0%	/dev/shm
		/dev/md8	2.0G	683M	1.3G	36%	/opt/oracle
		/dev/md4	116M	61M	49M	56%	/boot
	/dev/md11	2.3G	98M	2.1G	5%	/var/log/oracle	
	使用率过高的磁盘	无					
	IO	正常					
CPU	使用情况	Cpu(s): 0.3%us, 0.4%sy, 0.0%ni, 99.1%id, 0.1%wa, 0.0%hi, 0.0%si, 0.0%st					
	运行情况	正常					
	消耗CPU进程	无					
内存	使用情况	正常					
	运行情况	Mem: 24530660k total, 17822168k used, 6708492k free, 187028k buffers					
swap	使用情况	正常					
	运行情况	Swap: 2104376k total, 0k used, 2104376k free, 3611656k cached					
IO	状态	正常					
Systemlog	系统日志	/var/log/messages					
	日志情况	正常					
userlog	用户日志	/var/log/secure					
	日志情况	正常					

10.3.6 总结:

Dbserver与stroage cell 的linux 操作系统运行正常，无CPU、内存和磁盘使用率过高情况。

10.4 Infiniband 交换机

10.4.1 全系统状态

LUNAR2SW-IB2

Table 1

SUN DCS 36p version: 1.3.3-2 Build time: Apr 4 2011 11:15:19 SP board info: Manufacturing Date: 2011.05.10 Serial Number: "NCD6I0185" Hardware Revision: 0x0006 Firmware Revision: 0x0000

BIOS version: SUN0R100
BIOS date: 06/22/2010
[root@Lunar2sw-ib2 ~]# env_test
Environment test started:
Starting Environment Daemon test:
Environment daemon running
Environment Daemon test returned OK
Starting Voltage test:
Voltage ECB OK
Measured 3.3V Main = 3.27 V
Measured 3.3V Standby = 3.39 V
Measured 12V = 11.97 V
Measured 5V = 4.99 V
Measured VBAT = 3.09 V
Measured 2.5V = 2.50 V
Measured 1.8V = 1.79 V
Measured I4 1.2V = 1.22 V
Voltage test returned OK
Starting PSU test:
PSU 0 present OK
PSU 1 present OK
PSU test returned OK
Starting Temperature test:
Back temperature 30
Front temperature 31
SP temperature 42
Switch temperature 42, maxtemperature 58
Temperature test returned OK
Starting FAN test:
Fan 0 not present
Fan 1 running at rpm 12426
Fan 2 running at rpm 12426
Fan 3 running at rpm 12535
Fan 4 not present
FAN test returned OK
Starting Connector test:
Connector test returned OK
Starting Onboard ibdevice test:
Switch OK
All Internal ibdevices OK
Onboard ibdevice test returned OK
Environment test PASSED

LUNAR2SW-IB3

Table 2

Environment test started:
Starting Environment Daemon test:
Environment daemon running
Environment Daemon test returned OK
Starting Voltage test:
Voltage ECB OK
Measured 3.3V Main = 3.27 V
Measured 3.3V Standby = 3.37 V
Measured 12V = 11.97 V
Measured 5V = 4.99 V
Measured VBAT = 3.09 V
Measured 2.5V = 2.52 V
Measured 1.8V = 1.78 V
Measured I4 1.2V = 1.22 V
Voltage test returned OK
Starting PSU test:
PSU 0 present OK

PSU 1 present OK
 PSU test returned OK
 Starting Temperature test:
 Back temperature 28
 Front temperature 29
 SP temperature 45
 Switch temperature 39, maxtemperature 55
 Temperature test returned OK
 Starting FAN test:
 Fan 0 not present
 Fan 1 running at rpm 12099
 Fan 2 running at rpm 11772
 Fan 3 running at rpm 11881
 Fan 4 not present
 FAN test returned OK
 Starting Connector test:
 Connector test returned OK
 Starting Onboard ibdevice test:
 Switch OK
 All Internal ibdevices OK
 Onboard ibdevice test returned OK
 Environment test PASSED

10.4.2 系统组件状态

LUNAR2SW-Ib2

名称			状态
全系统	/SYS	Host System	OK
主板	/SYS/MB	Motherboard	OK
电源	/SYS/PSU0	Power Supply FRU	OK
	/SYS/PSU1	Power Supply FRU	OK
风扇模块	/SYS/FAN1	Rear Fan Module	OK
	/SYS/FAN2	Rear Fan Module	OK
	/SYS/FAN3	Rear Fan Module	OK

LUNAR2SW-IB3

名称			状态
全系统	/SYS	Host System	OK
主板	/SYS/MB	Motherboard	OK
电源	/SYS/PSU0	Power Supply FRU	OK
	/SYS/PSU1	Power Supply FRU	OK
风扇模块	/SYS/FAN1	Rear Fan Module	OK
	/SYS/FAN2	Rear Fan Module	OK
	/SYS/FAN3	Rear Fan Module	OK

10.4.3 系统硬件日志

LUNAR2SW-IB2

无异常

LUNAR2SW-IB3

无异常

	ROM: 12.2(31r)SGA2 Dagobah Revision 226, Swamp Revision 5 Lunar2sw-ip uptime is 1 year, 48 weeks, 5 hours, 20 minutes System returned to ROM by power-on System image file is "bootflash:cat4500-ipbase-mz.122-53.SG2.bin" cisco WS-C4948 (MPC8245) processor (revision 0) with 262144K bytes of memory. Processor board ID FOX1511G7TV MPC8245 CPU at 266Mhz, Fixed Module Last reset from PowerUp 2 Virtual Ethernet interfaces 48 Gigabit Ethernet interfaces 511K bytes of non-volatile configuration memory. Configuration register is 0x2101	
Cisco设备CPU利用状况检查: <70%		
Cpu:	CPU utilization for five seconds: 10%/0%; one minute: 13%; five minutes: 13%	OK
Cisco设备memory利用状况检查: <70%		
Memory	Processor Pool Total: 223549284 Used: 135712044 Free: 87837240	OK
Cisco设备模块运行状态检查: 运行正常		
Module	Chassis Type : WS-C4948 Power consumed by backplane : 0 Watts Mod Ports Card Type Model Serial No. -----+-----+-----+-----+----- 1 48 1000BaseX (SFP) Supervisor WS-C4948 FOX1511G7TV M MAC addresses Hw Fw Sw Status -----+-----+-----+-----+----- 1 e8b7.48a5.9d40 to e8b7.48a5.9d6f 1.8 12.2(31r)SGA 12.2(53)SG2 Ok	OK

10.6.2 总结:

思科交换机运行状态良好

11. 附录参考

Exadata Firmware and Software版本检查

该项检查工作主要针对Exadata Database server 和Storage server的软件和firmware版本进行检查。尤其是安装、升级、刷机等重大调整后，建议执行该项检查。

Database server Firmware and Software versions

Firmware and Software	versions	节点
Clusterware and RDBMS software version	lunardb01. CRS_ACTIVE_VERSION = 11.2.0.3.0 lunardb01.db05. INSTANCE_VERSION = 112030 lunardb01.db06. INSTANCE_VERSION = 112030	lunardb01/ lunardb02/ lunardb03/ lunardb04
Clusterware home patch (/u01/app/11.2.0.3/grid)	Patch 13919095 : applied on Fri Aug 10 16:35:40 CST 2012 Patch 14103267 : applied on Fri Aug 10 16:34:43 CST 2012 Patch 14184077 : applied on Fri Aug 10 16:36:25 CST 2012 Patch description: "CRS PATCH FOR EXADATA (JUL 2012 - 11.2.0.3.8) : (13919095)" Patch description: "DISKMON PATCH FOR EXADATA (JUL 2012 - 11.2.0.3.8) : (14184077)" Patch description: "QUARTERLY DATABASE PATCH FOR EXADATA (JUL 2012 - 11.2.0.3.8) : (14103267)"	lunardb01/ lunardb02/ lunardb03/ lunardb04 lunardb05/ lunardb06/ lunardb07/ lunardb08
Exadata Server software version	version:11.2.3.1.1.120607	lunardb01/ lunardb02/ lunardb03/ lunardb04 lunardb05/ lunardb06/ lunardb07/ lunardb08
Infiniband HCA firmware version	Firmware version: 2.7.8130	lunardb01/ lunardb02/ lunardb03/ lunardb04 lunardb05/ lunardb06/ lunardb07/ lunardb08
OpenFabrics Enterprise Distribution (OFED) Software version	1.5.1	lunardb01/ lunardb02/ lunardb03/ lunardb04 lunardb05/ lunardb06/ lunardb07/ lunardb08

Operating system and Kernel version	Red Hat Enterprise Linux Server release 5.7 (Tikanga) kernel=2.6.18-274.18.1.0.1.el5	lunardb01/ lunardb02/ lunardb03/ lunardb04 lunardb05/ lunardb06/ lunardb07/ lunardb08
RDBMS home patch (/u01/app/oracle/product/11.2.0.3/dbhome_1)	Patch 13919095 : applied on Fri Aug 10 18:48:43 CST 2012 Patch 14103267 : applied on Fri Aug 10 18:47:57 CST 2012 Patch 14184077 : applied on Fri Aug 10 18:49:00 CST 2012 Patch description: "CRS PATCH FOR EXADATA (JUL 2012 - 11.2.0.3.8) : (13919095)" Patch description: "DISKMON PATCH FOR EXADATA (JUL 2012 - 11.2.0.3.8) : (14184077)" Patch description: "QUARTERLY DATABASE PATCH FOR EXADATA (JUL 2012 - 11.2.0.3.8) : (14103267)"	lunardb01/ lunardb02/ lunardb03/ lunardb04 lunardb05/ lunardb06/ lunardb07/ lunardb08

Storage server Firmware and Software versions

Firmware and Software	versions	节点
Exadata Server software version	version:11.2.3.1.1.120607	lunarcel01 lunarcel02
Infiniband HCA firmware version	Firmware version: 2.7.8130	lunarcel03 lunarcel04 lunarcel05
OpenFabrics Enterprise Distribution (OFED) Software version	1.5.1	lunarcel06 lunarcel07 lunarcel08 lunarcel09
Operating system and Kernel version	Red Hat Enterprise Linux Server release 5.7 (Tikanga) kernel=2.6.18-274.18.1.0.1.el5	lunarcel10 lunarcel11 lunarcel12 lunarcel13 lunarcel14



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